

STUDY OF SURGE CURRENT EFFECTS ON SOLID TANTALUM CAPACITORS

FINAL REPORT

(NASA-CR-161433) STUDY OF SURGE CURRENT  
EFFECTS ON SOLID TANTALUM CAPACITORS Final  
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Contract No. NAS 8-33424

SPRAGUE ELECTRIC COMPANY  
North Adams, Mass. 01247  
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## SECTION I

### ABSTRACT

Approximately seven hundred (700) 47  $\mu$ f/35 Volt capacitors were manufactured and tested in accordance with Alternate A of the proposal submitted and ultimately formalized as NASA Contract NAS 8-33424. As the various read-out intervals occurred, the data was forwarded, as required, for information and evaluation. The 2000 hour data is part of this report.

SECTION 2  
DISCUSSION

1. GENERAL

Prior to the receipt of this contract, the use of surge current screening of solid tantalum capacitors had been used to minimize turn-on type failures in high current circuits. There was little background as to its effectiveness under conditions of continuous turn-ons at elevated temperatures representing extended life conditions. This included the use of surge current screening in accordance with Mil-C-39003/3 as well as other user and manufacturer surge current test procedures.

It is the objective of this contract to determine the effectiveness of short term surge current screening on solid tantalum capacitors and to measure its effect on parameters from 120 Hz to 40 KHz.

2. PROGRAM OF TEST

- a. 47 mfd - 35 volt capacitors were manufactured in the Sprague Electric, Concord, New Hampshire, facility in a line qualified to "S" level of Mil-C-39003D.

After standard HYREL burn-in, Weibull proof testing, and DCL screening for 3 sigma distributions, 700 capacitors were received for test which represented two different sub lots.

- b. The specialized test equipment was funded and manufactured "in house" by Sprague Electric.
- c. The parts were suitably identified with this contract and were serialized.
- d. A total of 528 parts were divided into two groups, designated "controls", and "surge current screened".
- e. Surge current screened parts were exposed to five cycles of surge current at 25°C, -55°C and +85°C prior to start of the test matrix.
- f. Each major group of 264 parts was subdivided as follows: (See Figure 1)

|                  |       |          |           |
|------------------|-------|----------|-----------|
| Life Test        | 125°C | 23 Volts | 48 pieces |
| Life Test        | 125°C | 0 Volts  | 48 pieces |
| Life Test        | 85°C  | 35 Volts | 72 pieces |
| Cycled Life Test | 125°C | 23 Volts | 96 pieces |

All parts were mounted on 24 position test boards with a 1 amp fast blow fuse in series with each capacitor so that the only resistance between the power source and any of the capacitors was the fuse resistance of 0.2 ohms in series with each capacitor.

- g. After mounting on test boards, capacitance, DF, and ESR was measured at 120 Hz, 1 KHz, and 40 KHz as well as DC leakage at 25°C and 85°C.

# SPRAGUE ELECTRIC SURGE CURRENT TEST PROGRAM 47 uF-35Vdc

528 TOTAL PIECES

264 PIECES  
CONTROLS

264 PIECES  
SURGE CURRENT SCREENED

|                                    |                                   |                                    |                                   |                                   |                                   |   |   |
|------------------------------------|-----------------------------------|------------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|---|---|
| LIFE TEST<br>125C, 23Vdc<br>48 PCS | LIFE TEST<br>125C, 8Vdc<br>48 PCS | LIFE TEST<br>125C, 23Vdc<br>48 PCS | LIFE TEST<br>125C, 8Vdc<br>48 PCS | LIFE TEST<br>85C, 35Vdc<br>72 PCS | LIFE TEST<br>85C, 35Vdc<br>72 PCS | CYCLED LIFE TEST<br>125C, 23Vdc<br>96 PCS | CYCLED LIFE TEST<br>125C, 23Vdc<br>96 PCS |
|------------------------------------|-----------------------------------|------------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|---|---|

READOUTS @ 0, 250, 500, 1000 & 2000 hrs.  
READINGS: CAP, DF, ESR @ 120, 1K & 40 Khz.  
DCL @ 25 & 85 C

FIGURE 1



h. The "Cycled Life Test" was run as follows:

125°C    Constant thru test matrix  
23V      Cycled "on" for 50 minutes and "off" for 10 minutes  
17amp    Power Supplies  
120000   Mfd energy storage banks  
300      Ampere peak current on charge into 1 board of 24 capacitors  
         at a time.  
40       Microseconds to 300 ampere peak currents on "charge".  
5 to 7%   Voltage overshoot

"Off" condition is discharge thru a short circuit

Figures 3 and 4 show the inrush current peak and voltage build up.

### 3. RESULTS OF 2000 HOUR TEST PROGRAM

The results of all of the testing is summarized in Tables 1 thru 4 and Figures 2, 5 through 20.

The format provides average values and standard deviations of the parameters, capacitance, dissipation factor and equivalent series resistance at 120 Hz, 1 KHz and 40 KHz.

DC leakages at 25°C and 85°C are shown in median values and ratios of maximum to median values which indicates the dispersion of the distribution.

#### Table 1, 85°C 35 Volt Life Test

This summary shows no significant difference to exist between the controls and surge current screened parts.

#### Table 2, 125°C 23 Volt Life Test

In the control group, 1 blown fuse occurred at 1000 hours and 2 more at 2000 hours for a cumulative total of 3 failures, while the surge screened group had no failures. This result seems to indicate a beneficial effect from surge current screening.

Failure analysis indicated no assignable reason for the failures to have occurred.

Failures at 125°C and 23 volts were unexpected, but it should be remembered that these parts were run without a 3 ohm resistance in series as specified in Mil-C-39003, and had only a 0.2 ohm 1 ampere fast blow fuse in series with each part.

Since the definition of failure is a blown fuse irrespective of electrical parameters, one should consider the parameters on the three failed parts, Which indicates 2 of the 3 blown fuse failures parts still meet all Mil-C-39003 electrical limits.

The definition of a failure by one blown 1 ampere fuse is a worse case failure definition which occurs during a dielectric scintillation, since in some cases the dielectric will self heal after the first fuse blow.

### Table 3, 125°C 0 Volt Shelf Test

Table 3 shows the high temperature storage or zero voltage shelf test results.

There does not appear to be any significant parameter differences between the controls and the surge current screened parts.

### Table 4, 125°C 23 Volts Cycled Life Test

Table 4 provides the summary of the surge current cycled life test.

The failures tabulated in this Table are more definitively shown in Figure 2.

Figure 2 shows diagrammatically, the location of each test board in the oven, i.e., boards 1 and 5 being side by side at the top of the oven and boards 4 and 8 being side by side at the bottom of the oven. Each block shown as a "board" indicates the number of failures as a fraction, i.e., "2/24" meaning that 2 pieces out of the 24 on the board failed. The numerical "hours" indicates approximate times into the test that failures occurred, since the failures denoted by LED's, were not visually monitored between 5 PM and 8 AM weekdays, and 5 PM Friday to 8 AM Monday, but the time indications are never the less, of considerable interest as compared to the normal life test readouts.

Performance differences indicated by blown fuses in the cycled life tests are more significant than for the normal life tests.

On the "Cycled Life Test", one board at a time was energized from the energy storage banks so each board saw a fast 40 microsecond charge of about 300 amperes peak, for 2000 charges at 23 Volts and 125°C, during the 2000 hour test.

Results after 2000 hours show:

| <u>Control Group</u> | <u>Surge Screened Group</u> |
|----------------------|-----------------------------|
| 4 Failures out of 96 | 8 Failures out of 96        |

however, comparing sublots:

| <u>Sublot</u> | <u>Control Group</u> | <u>Surge Screened Group</u> |
|---------------|----------------------|-----------------------------|
| 919825        | 3 Failures out of 48 | 8 Failures out of 48        |
| 919827        | 1 Failure out of 48  | 0 Failures out of 48        |

Comparing surge current cycling failure rates observed in the testing performed as outlined above with the Weibull (non-cycled) failure rate analysis performed on each of the sublots indicates the following:

| <u>Sublot</u> | <u>Control Group</u> | <u>Screened Group</u> | <u>Weibull</u>   |
|---------------|----------------------|-----------------------|------------------|
| 919825        | 4.17%/1000 Hrs       | 9.38%/1000 Hrs.       | 0.0021%/1000 Hrs |
| 919827        | 2.08%/1000 Hrs       | 1.04%/1000 Hrs.       | 0.0085%/1000 Hrs |

The above results appear to be contradictory unless one remembers that static testing (Weibull) is being compared to dynamic testing (cycled life).

**CYCLED LIFE TEST**  
**Blown Fuse Failures After 2000 Hours 125°C**  
**23 Volts**  
**50 Minutes On — 10 Minutes Off**

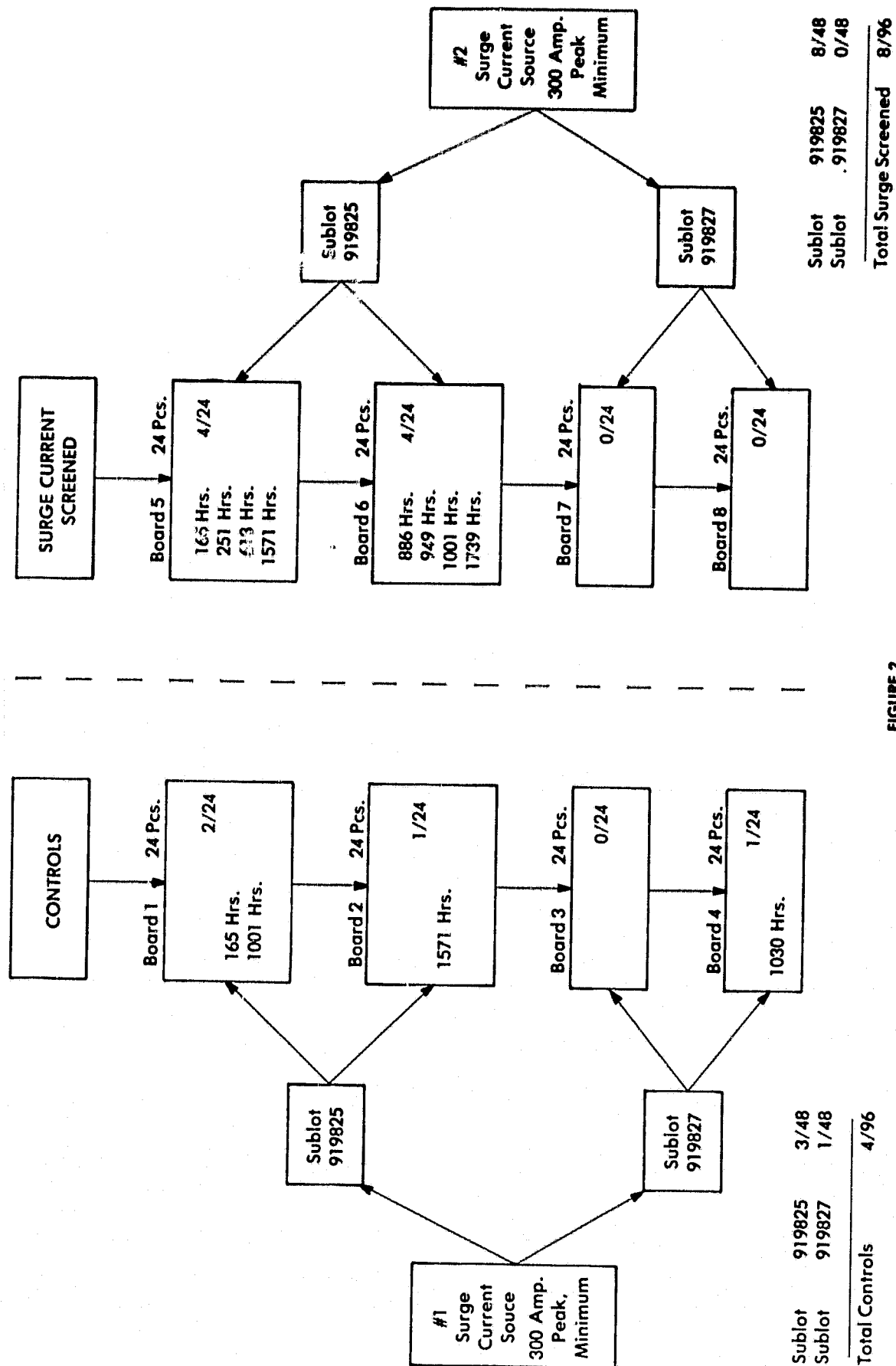


FIGURE 2

\*\*\* SPRAGUE ELECTRIC SURGE CURRENT TEST PROGRAM \*\*\*

===== LIFE TEST --- 85C, 35VOLTS =====

----- CONTROL UNITS ----- SURGE SCREENED UNITS -----

| HOURS | CAPACITANCE (uf) |      | AVG:STD DEV |       |
|-------|------------------|------|-------------|-------|
|       | 120Hz            | 1KHz | 40KHz       | 40KHz |

|      |              |              |              |  |
|------|--------------|--------------|--------------|--|
| 0    | 42.50 : 1.44 | 42.16 : 1.44 | 25.17 : 1.83 |  |
| 250  | 42.50 : 1.46 | 42.16 : 1.44 | 25.99 : 1.91 |  |
| 500  | 42.43 : 1.45 | 42.11 : 1.44 | 25.60 : 1.86 |  |
| 1000 | 42.39 : 1.46 | 42.07 : 1.44 | 25.93 : 1.93 |  |
| 2000 | 42.36 : 1.45 | 42.04 : 1.44 | 26.35 : 2.02 |  |

| HOURS | DISSIPATION FACTOR (Z) |      | AVG:STD DEV |       |
|-------|------------------------|------|-------------|-------|
|       | 120Hz                  | 1KHz | 40KHz       | 40KHz |

|      |             |             |                |  |
|------|-------------|-------------|----------------|--|
| 0    | 1.38 : 0.13 | 6.83 : 0.76 | 106.70 : 5.683 |  |
| 250  | 1.34 : 0.12 | 6.50 : 0.72 | 106.73 : 5.776 |  |
| 500  | 1.33 : 0.12 | 6.56 : 0.74 | 106.74 : 5.815 |  |
| 1000 | 1.29 : 0.12 | 6.44 : 0.73 | 106.58 : 5.872 |  |
| 2000 | 1.30 : 0.12 | 6.36 : 0.74 | 107.73 : 6.101 |  |

| HOURS | ESR (OHMS) |      | AVG:STD DEV |       |
|-------|------------|------|-------------|-------|
|       | 120Hz      | 1KHz | 40KHz       | 40KHz |

|      |               |               |               |  |
|------|---------------|---------------|---------------|--|
| 0    | 0.430 : 0.048 | 0.259 : 0.033 | 0.169 : 0.015 |  |
| 250  | 0.418 : 0.041 | 0.246 : 0.031 | 0.164 : 0.014 |  |
| 500  | 0.415 : 0.041 | 0.249 : 0.032 | 0.166 : 0.015 |  |
| 1000 | 0.405 : 0.041 | 0.244 : 0.032 | 0.164 : 0.015 |  |
| 2000 | 0.407 : 0.042 | 0.242 : 0.032 | 0.164 : 0.015 |  |

| HOURS | DCL (uA)       |                      | FUSE BLOWS |  |
|-------|----------------|----------------------|------------|--|
|       | MEDIAN :: 25'C | RATIO (MAX/MED) 85'C | CUMULATIVE |  |

|      |               |               |   |  |
|------|---------------|---------------|---|--|
| 0    | 0.095 : 4.695 | 0.426 : 30.62 | 0 |  |
| 250  | 0.073 : 4.329 | 0.303 : 31.74 | 0 |  |
| 500  | 0.066 : 4.786 | 0.308 : 30.26 | 0 |  |
| 1000 | 0.076 : 4.172 | 0.330 : 28.77 | 0 |  |
| 2000 | 0.069 : 5.723 | 0.331 : 41.97 | 0 |  |

TABLE 1

\*\*\* SPRAGUE ELECTRIC SURGE CURRENT TEST PROGRAM \*\*\*

===== LIFE TEST --- 1250, 23 VOLTS =====

----- CONTROL UNITS ----- SURGE SCREENED UNITS -----

| HOURS | CAPACITANCE (uf) |              | AVG:STD DEV  |  |
|-------|------------------|--------------|--------------|--|
|       | 120Hz            | 1KHz         | 40KHz        |  |
| 0     | 42.53 : 1.47     | 42.22 : 1.48 | 25.25 : 2.21 |  |
| 250   | 42.42 : 1.49     | 42.05 : 1.50 | 27.88 : 2.80 |  |
| 500   | 42.31 : 1.49     | 41.93 : 1.51 | 27.71 : 2.83 |  |
| 1000  | 42.26 : 1.51     | 41.85 : 1.53 | 27.96 : 2.96 |  |
| 2000  | 42.16 : 1.54     | 41.72 : 1.57 | 27.66 : 2.98 |  |

|      | DISSIPATION FACTOR (%) |             | AVG:STD DEV    |  |
|------|------------------------|-------------|----------------|--|
|      | 120Hz                  | 1KHz        | 40KHz          |  |
| 0    | 1.32 : 0.12            | 6.77 : 0.78 | 105.75 : 4.98  |  |
| 250  | 1.34 : 0.15            | 6.06 : 0.83 | 110.52 : 7.44  |  |
| 500  | 1.35 : 0.16            | 6.20 : 0.88 | 112.89 : 8.36  |  |
| 1000 | 1.42 : 0.18            | 6.37 : 0.94 | 116.74 : 9.93  |  |
| 2000 | 1.48 : 0.20            | 6.57 : 1.03 | 118.57 : 11.55 |  |

|      | ESR (OHMS)    |               | AVG:STD DEV   |  |
|------|---------------|---------------|---------------|--|
|      | 120Hz         | 1KHz          | 40KHz         |  |
| 0    | 0.414 : 0.049 | 0.257 : 0.037 | 0.168 : 0.016 |  |
| 250  | 0.420 : 0.057 | 0.230 : 0.035 | 0.159 : 0.018 |  |
| 500  | 0.425 : 0.061 | 0.237 : 0.041 | 0.164 : 0.020 |  |
| 1000 | 0.447 : 0.067 | 0.243 : 0.044 | 0.168 : 0.022 |  |
| 2000 | 0.468 : 0.076 | 0.252 : 0.048 | 0.172 : 0.025 |  |

|      | DCL (uA)       |                      | FUSE BLOWS |  |
|------|----------------|----------------------|------------|--|
|      | MEDIAN :: 25°C | RATIO (MAX/MED) 85°C | CUMULATIVE |  |
| 0    | 0.091 : 5.64   | 0.380 : 44.37        | 0          |  |
| 250  | 0.091 : 4.79   | 0.367 : 37.82        | 0          |  |
| 500  | 0.063 : 7.41   | 0.332 : 47.01        | 0          |  |
| 1000 | 0.065 : 17.00  | 0.300 : 51.16        | 1          |  |
| 2000 | 0.070 : 8.36   | 0.431 : 53.83        | 3          |  |

\*\*\*\* SPRAGUE ELECTRIC SURGE CURRENT TEST PROGRAM \*\*\*\*

==== LIFE TEST --- 125C, 0VOLTS ===

----- CONTROL UNITS ----- SURGE SCREENED UNITS -----

| HOURS | CAPACITANCE (uf) |       | AVG:STD DEV |       |
|-------|------------------|-------|-------------|-------|
|       | 120Hz            | 40KHz | 1KHz        | 40KHz |

|      |              |              |              |              |              |
|------|--------------|--------------|--------------|--------------|--------------|
| 0    | 42.66 : 1.49 | 42.34 : 1.48 | 25.39 : 2.22 | 41.99 : 1.68 | 25.81 : 2.18 |
| 250  | 42.57 : 1.50 | 42.22 : 1.50 | 27.82 : 2.60 | 41.95 : 1.70 | 27.44 : 2.72 |
| 500  | 42.43 : 1.50 | 42.08 : 1.50 | 28.09 : 2.83 | 41.71 : 1.70 | 27.59 : 2.83 |
| 1000 | 42.35 : 1.50 | 41.96 : 1.50 | 28.27 : 2.91 | 41.59 : 1.71 | 27.34 : 2.80 |
| 2000 | 42.23 : 1.51 | 41.80 : 1.52 | 27.97 : 3.06 | 41.45 : 1.73 | 27.42 : 2.84 |

| HOURS | DISSIPATION FACTOR (%) |       | AVG:STD DEV |       |
|-------|------------------------|-------|-------------|-------|
|       | 120Hz                  | 40KHz | 1KHz        | 40KHz |

|      |             |             |                |             |                |
|------|-------------|-------------|----------------|-------------|----------------|
| 0    | 1.31 : 0.12 | 6.73 : 0.83 | 106.02 : 5.09  | 6.76 : 0.76 | 104.88 : 4.947 |
| 250  | 1.29 : 0.13 | 6.00 : 0.83 | 110.09 : 7.02  | 6.05 : 0.79 | 108.58 : 5.529 |
| 500  | 1.31 : 0.15 | 6.13 : 0.87 | 115.06 : 8.33  | 6.17 : 0.84 | 111.67 : 6.063 |
| 1000 | 1.39 : 0.17 | 6.34 : 0.93 | 119.18 : 10.12 | 6.33 : 0.83 | 113.64 : 7.059 |
| 2000 | 1.49 : 0.21 | 6.76 : 1.20 | 125.23 : 12.71 | 6.59 : 0.93 | 118.52 : 8.186 |

| HOURS | ESR (OHMS) |       | AVG:STD DEV |       |
|-------|------------|-------|-------------|-------|
|       | 120Hz      | 40KHz | 1KHz        | 40KHz |

|      |               |               |               |               |               |
|------|---------------|---------------|---------------|---------------|---------------|
| 0    | 0.408 : 0.046 | 0.254 : 0.038 | 0.163 : 0.018 | 0.257 : 0.036 | 0.168 : 0.015 |
| 250  | 0.404 : 0.050 | 0.227 : 0.038 | 0.179 : 0.020 | 0.231 : 0.037 | 0.159 : 0.017 |
| 500  | 0.410 : 0.055 | 0.233 : 0.040 | 0.165 : 0.022 | 0.236 : 0.039 | 0.163 : 0.018 |
| 1000 | 0.437 : 0.063 | 0.242 : 0.043 | 0.170 : 0.025 | 0.244 : 0.041 | 0.167 : 0.020 |
| 2000 | 0.470 : 0.075 | 0.259 : 0.052 | 0.181 : 0.031 | 0.254 : 0.043 | 0.174 : 0.022 |

| HOURS | DCL (uA) |      | AVG:STD DEV |       |
|-------|----------|------|-------------|-------|
|       | 25°C     | 85°C | 1KHz        | 40KHz |

|      |               |               |               |               |
|------|---------------|---------------|---------------|---------------|
| 0    | 0.107 : 3.822 | 0.492 : 11.80 | 0.390 : 17.33 | 0.168 : 0.015 |
| 250  | 0.089 : 3.984 | 0.404 : 6.59  | 0.278 : 7.73  | 0.159 : 0.017 |
| 500  | 0.255 : 6.090 | 0.521 : 8.11  | 0.424 : 4.18  | 0.163 : 0.018 |
| 1000 | 0.511 : 2.662 | 1.122 : 6.11  | 1.006 : 5.18  | 0.167 : 0.020 |
| 2000 | 0.548 : 8.869 | 1.890 : 13.76 | 1.460 : 2.45  | 0.174 : 0.022 |

\*\*\*\*\* SPRAGUE ELECTRIC SURGE CURRENT TEST PROGRAM \*\*\*\*\*

==== CYCLED LIFE TEST -- 1250.23VOLTS ===

CONTROL UNITS ----- SURGE SCREENED UNITS -----

| HOURS | CAPACITANCE (uf) |              | AVG:STD DEV  |  |
|-------|------------------|--------------|--------------|--|
|       | 120Hz            | 1KHz         | 40KHz        |  |
| 0     | 42.05 : 1.04     | 41.74 : 1.03 | 24.80 : 1.70 |  |
| 250   | 41.91 : 1.04     | 41.56 : 1.04 | 27.41 : 2.11 |  |
| 500   | 41.77 : 1.04     | 41.41 : 1.04 | 26.92 : 2.11 |  |
| 1000  | 41.78 : 1.05     | 41.40 : 1.04 | 27.52 : 2.19 |  |
| 2000  | 41.70 : 1.07     | 41.28 : 1.07 | 27.34 : 2.22 |  |

| HOURS | DISSIPATION FACTOR (Z) |             | AVG:STD DEV    |  |
|-------|------------------------|-------------|----------------|--|
|       | 120Hz                  | 1KHz        | 40KHz          |  |
| 0     | 1.35 : 0.11            | 6.84 : 0.74 | 106.54 : 5.58  |  |
| 250   | 1.31 : 0.12            | 6.15 : 0.76 | 112.91 : 8.45  |  |
| 500   | 1.33 : 0.13            | 6.39 : 0.82 | 114.84 : 9.33  |  |
| 1000  | 1.37 : 0.14            | 6.29 : 0.81 | 115.78 : 10.19 |  |
| 2000  | 1.42 : 0.15            | 6.45 : 0.87 | 117.88 : 11.17 |  |

| HOURS | ESR (OHMS)    |               | AVG:STD DEV   |  |
|-------|---------------|---------------|---------------|--|
|       | 120Hz         | 1KHz          | 40KHz         |  |
| 0     | 0.426 : 0.039 | 0.261 : 0.032 | 0.172 : 0.015 |  |
| 250   | 0.414 : 0.043 | 0.236 : 0.033 | 0.165 : 0.017 |  |
| 500   | 0.424 : 0.047 | 0.246 : 0.035 | 0.171 : 0.019 |  |
| 1000  | 0.435 : 0.049 | 0.242 : 0.035 | 0.166 : 0.020 |  |
| 2000  | 0.453 : 0.054 | 0.249 : 0.037 | 0.173 : 0.022 |  |

| HOURS | DCL (uA)      |               | AVG:STD DEV   |  |
|-------|---------------|---------------|---------------|--|
|       | 120Hz         | 1KHz          | 40KHz         |  |
| 0     | 0.074 : 5.436 | 0.352 : 27.16 | 0.163 : 0.018 |  |
| 250   | 0.075 : 5.854 | 0.286 : 24.66 | 0.159 : 0.019 |  |
| 500   | 0.085 : 5.194 | 0.299 : 25.23 | 0.165 : 0.020 |  |
| 1000  | 0.070 : 6.106 | 0.255 : 26.82 | 0.162 : 0.022 |  |
| 2000  | 0.071 : 8.113 | 0.335 : 25.41 | 0.166 : 0.023 |  |

As previously explained, Figure 2 shows diagrammatically the location of the test boards in the oven. At the 500 hour readout of the cycled life test, a temperature profile was made on the top boards where early failures was noted. The top two boards were found to have been running at 135°C instead of 125°C due to radiation from the heaters at the top of the oven. Heat baffles were installed after 500 hours so that all boards operated at 125°C after that.

#### 4. GENERAL OBSERVATIONS

- a. 40 KHz capacitance increased almost 10% on all 125°C tests with most of the increase occurring before 250 hours.
- b. 40 KHz capacitance increased only 2.5% on the 85°C tests with most of the increase occurring before 250 hours.
- c. 120 Hz capacitance remained almost unchanged on both 85°C and 125°C tests.
- d. Equivalent series resistance (ESR) at 40 KHz remained almost unchanged on all tests including the severe cycle life tests with the high current charging and discharging.
- e. D.C. leakage at 25°C, decreased on all tests except the 125°C, zero voltage shelf test where it increased by a factor approaching 5 times.
- f. D.C. leakage at 85°C decreased on all tests except the 125°C, zero voltage shelf test where it increased more than 1.5 times its original value.
- g. D.C. leakage degradation on the 125°C, zero voltage shelf test has a much greater effect on the lower levels of DCL at 25°C than on the higher +85°C DCL levels.

#### 5. CONCLUSIONS

1. The cycled life test appears to indicate that surge current screening did not improve the performance of parts on the steady 125°C on/off test and that the controls had less failures.

Analysis of the numbers of failures statistically however, shows that the difference between the two sides is not significant.

Separation of the two sides of the test into their respective sublots does indicate that one lot is superior to the other lot on the cycled life test, even though our standard methods of lot evaluation indicated just the opposite.

The results on the cycled life test would likely have been more definitive if the surge current screening and cycled life tests were performed on the same equipment and over the same low to high temperature range with continuous monitoring of all events, temperatures, currents and voltages thru out the 2000 hours.

2. The cycled life test appears to indicate that performance differences can exist between the two sublots that made up the matrix even though normal sublot testing, Weibull accelerated testing and conventional 85°C and 125°C life testing did not indicate that these sublots were different. The details shown in Figure 2 would make it appear that surge current screening aggravated subplot 919825 since there were eight failures out of 48 pieces



(8/48) which were surge current screened and only three failures out of 48 pieces (3/48) which were not surge current screened. In the case of subplot 919827 the opposite appeared to occur. That is, there were no failures out of 48 pieces (0/48) which were surge current screened, while there was one failure out of 48 pieces (1/48) which were not surge current screened. From a statistical point of view, there is no significant differences between 0/48 and 1/48 if no other information is available. This is not true when comparing 8/48 with 3/48.

The differences between the two sublots could have been significantly affected by a temperature gradient problem encountered early in the test program. It was found that the upper test boards were subjected to approximately 135°C during the first 500 hours. This may have a bearing on the difference between the sublots but not between screened and non-screened test boards.

It should be kept in mind that the surge current screening was done at -55°C, +25°C and +85°C whereas the cycled life test was performed at +125°C. Had the cycled life tests repeated the same temperature excursions as the surge current screening test, the results may have been more sharply defined.

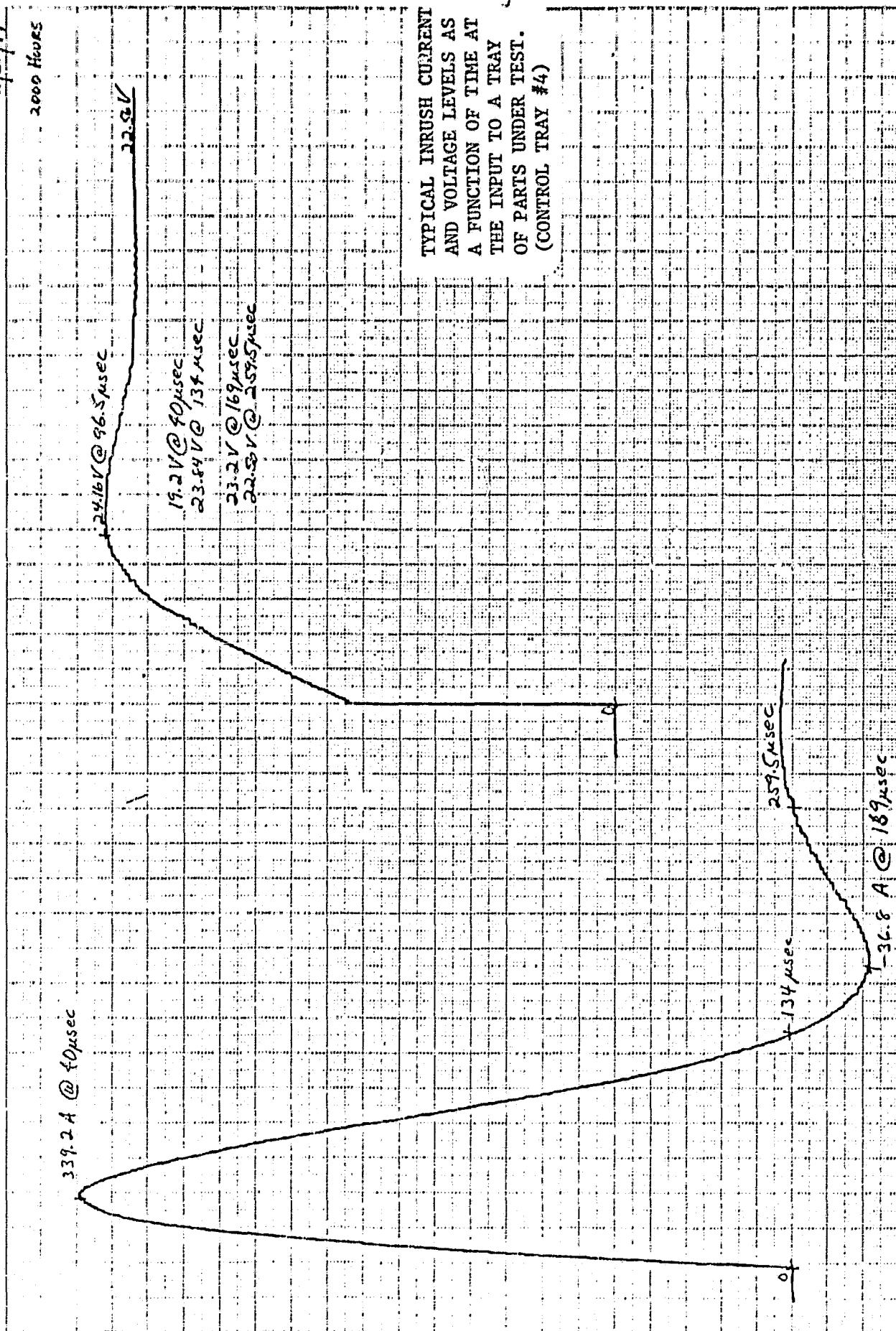
3. The design of the surge current test facility for maximum current inrush while minimizing voltage overshoot was achieved as shown in Figures 3 & 4. These are typical of the results achieved on allboard positions. It can be seen that an average of about 14 amps peak inrush per capacitor was reached in about 40 microseconds with only about 5 to 7% voltage overshoot. This rate of rise of current with respect to time is much higher than would be encountered in actual applications, thus a more severe test condition.
4. Overall, it is not realistic to attempt to draw a firm conclusion as to the effectiveness of a surge current screen on solid tantalum capacitors based on the conditions described herein because of the small number of failures.

#### 6. RECOMMENDATIONS

In order to provide a more realistic and definitive evaluation of surge current screening, it appears that the cycled life test should be modified to include temperature cycling as well as voltage cycling. Since mechanical stresses on the dielectric are proportional to the square of the voltage applied, it appears that a more severe set of conditions would be desirable to determine if this was a factor in "turn-on" failures. Therefore, it is recommended that full rated voltage at 85°C be used instead of two-thirds rated voltage at 25°C. Further, since the surge current screening was performed at -55°C, +25°C and +85°C, to more nearly approximate actual use conditions, the temperature cycling during life should also cover the same extremes of temperature of -55°C and +85°C. An engineering change proposal has been submitted covering these recommendations.

11/21/79

2000 HOURS



TYPICAL INRUSH CURRENT  
AND VOLTAGE LEVELS AS  
A FUNCTION OF TIME AT  
THE INPUT TO A TRAY  
OF PARTS UNDER TEST.  
(CONTROL TRAY #4)

FIGURE 3

2000 Hours

345.6 A @ 4.2 msec

22.54V @ 103  $\mu$ sec

✓ 25.55

19.52V@42μs/c

23.68V @ 136μsec

23.2V @ 171.8μsec

22.72V @ 278  $\mu$ sec.

TYPICAL INRUSH CURRENT  
LEVELS AND VOLTAGE  
LEVELS AS A FUNCTION  
OF TIME AT THE INPUT  
TO A TRAY OF PARTS  
UNDER TEST. (SURGE  
TEST TRAY #4)

**C**

5

2021/11/11

278  $\mu$ sec

-25.2A @ 171.5  $\mu$ sec

FILE 4

LIFE TEST 85C 35VDC

AVERAGE CAP

CONTROLS

SURGE SCREENED

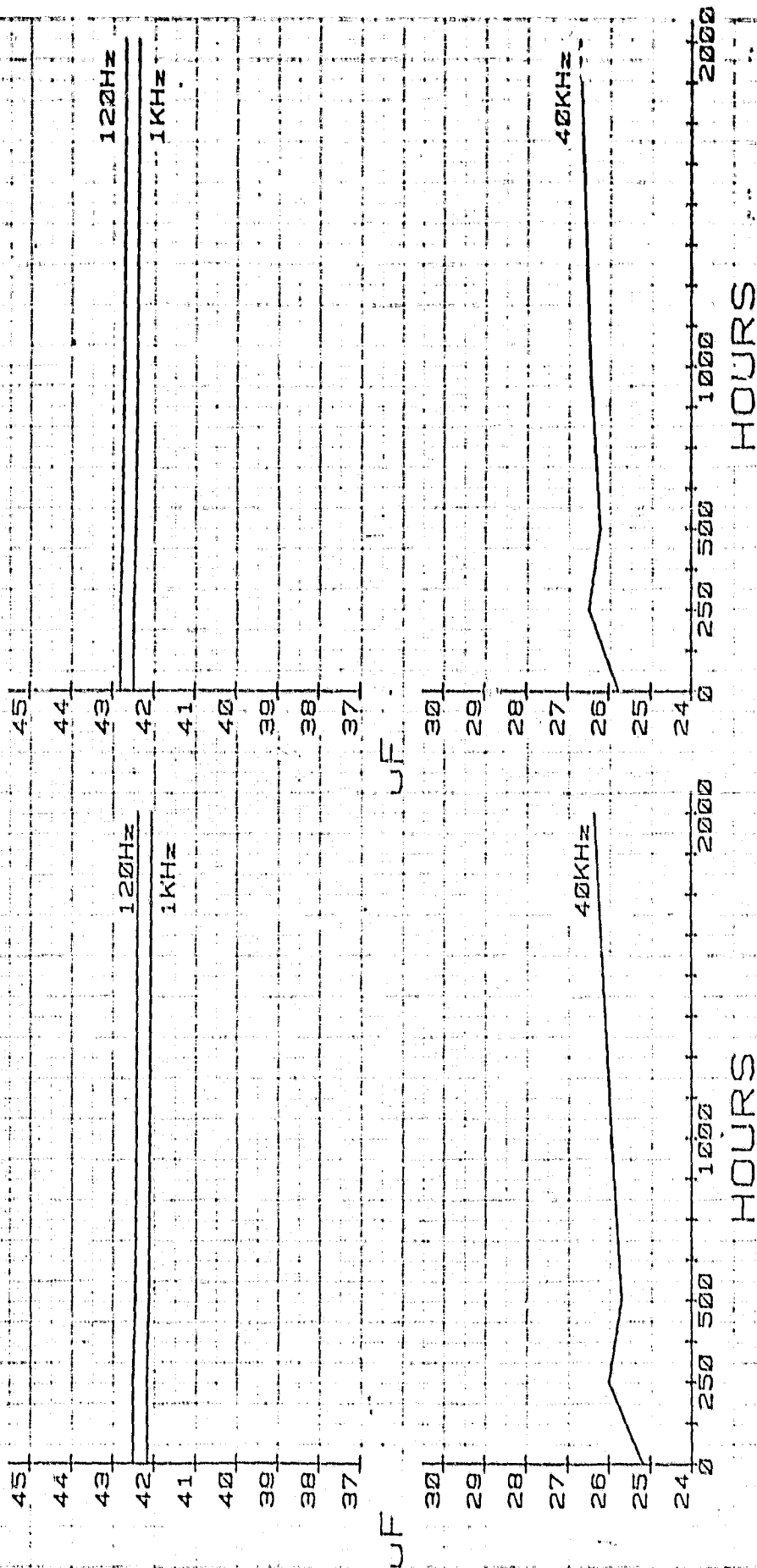


FIGURE 5

# LIFE TEST - 85C, 35VDC AVERAGE DF

CONTROLS

SURGE SCREENED

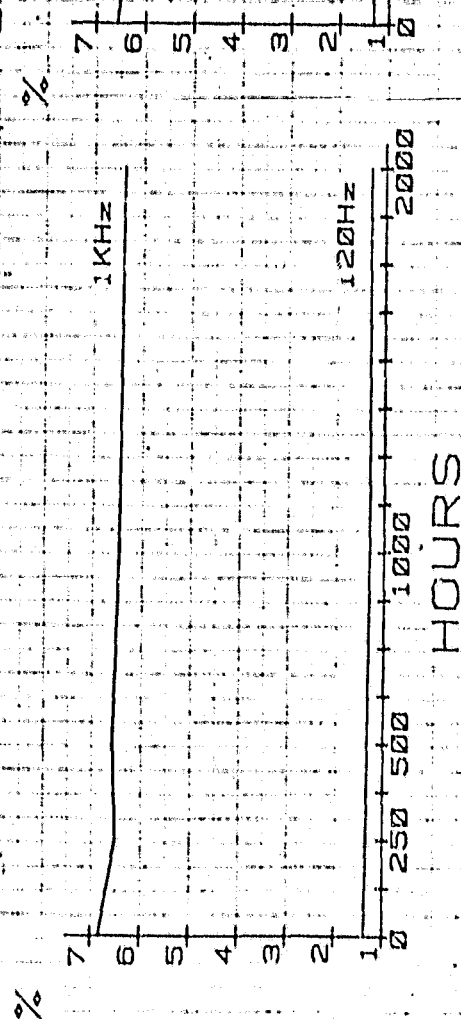
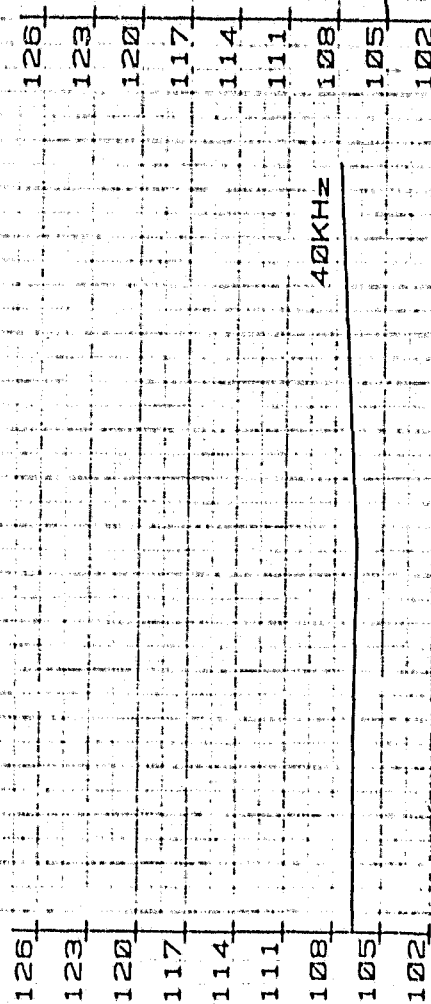


FIGURE 6

# LIFE TEST -- 85C, 35VDC

## AVERAGE ESR

CONTROLS

SURGE SCREENED

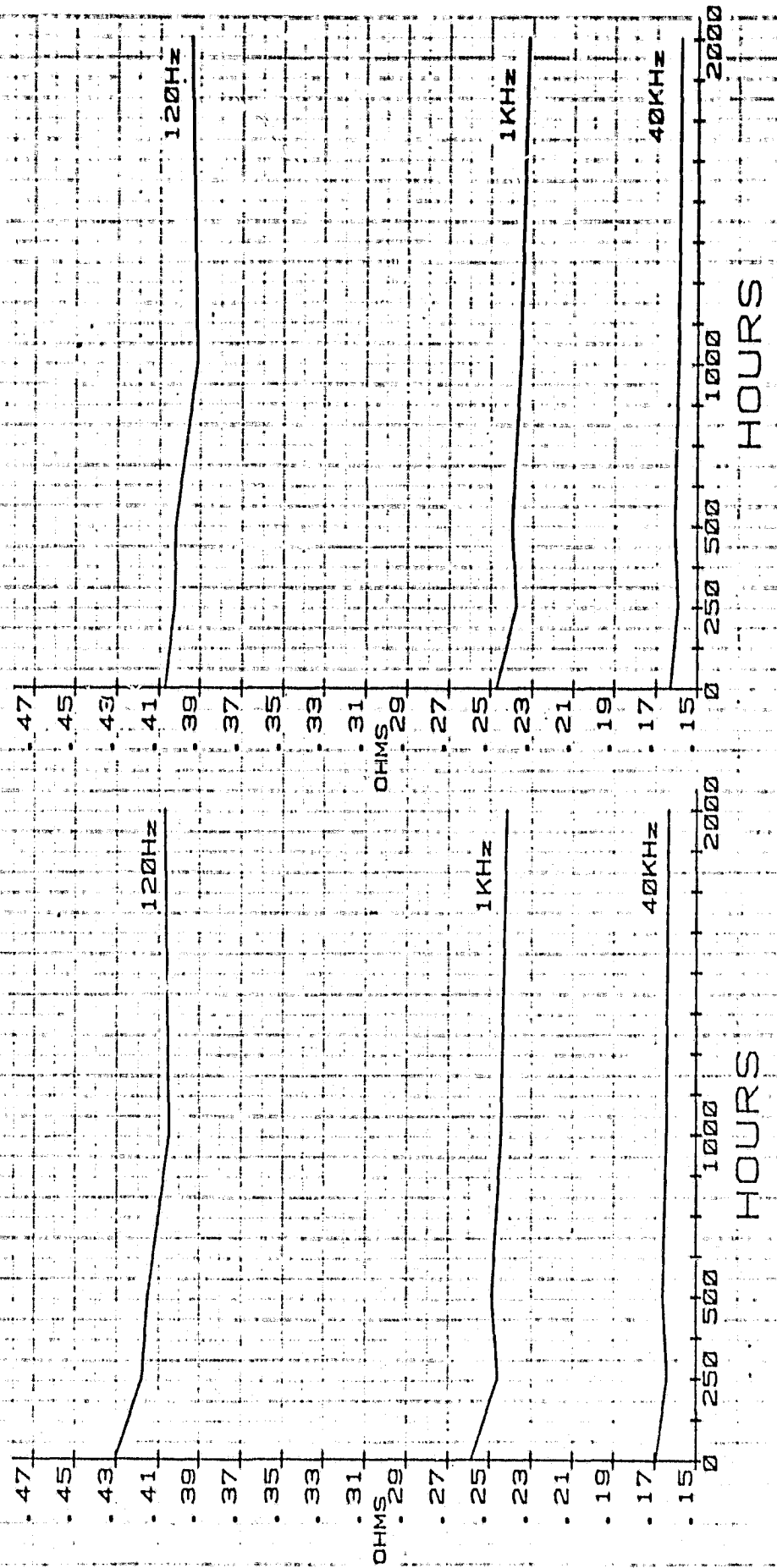


FIGURE 7

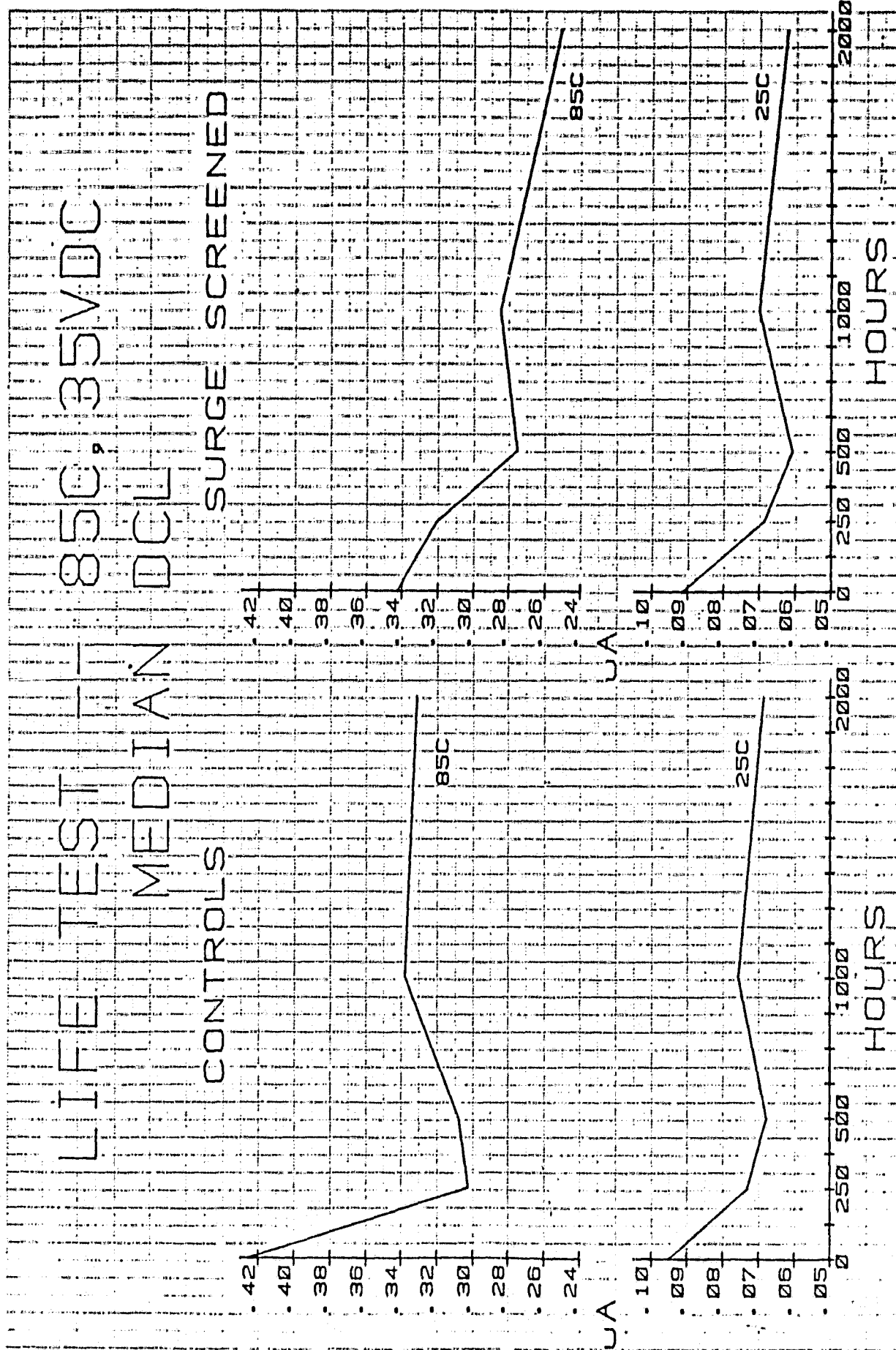


FIGURE 8



# LIFE TEST -- 125C, 0VDC

## AVERAGE CAP

CONTROLS

SURGE SCREENED

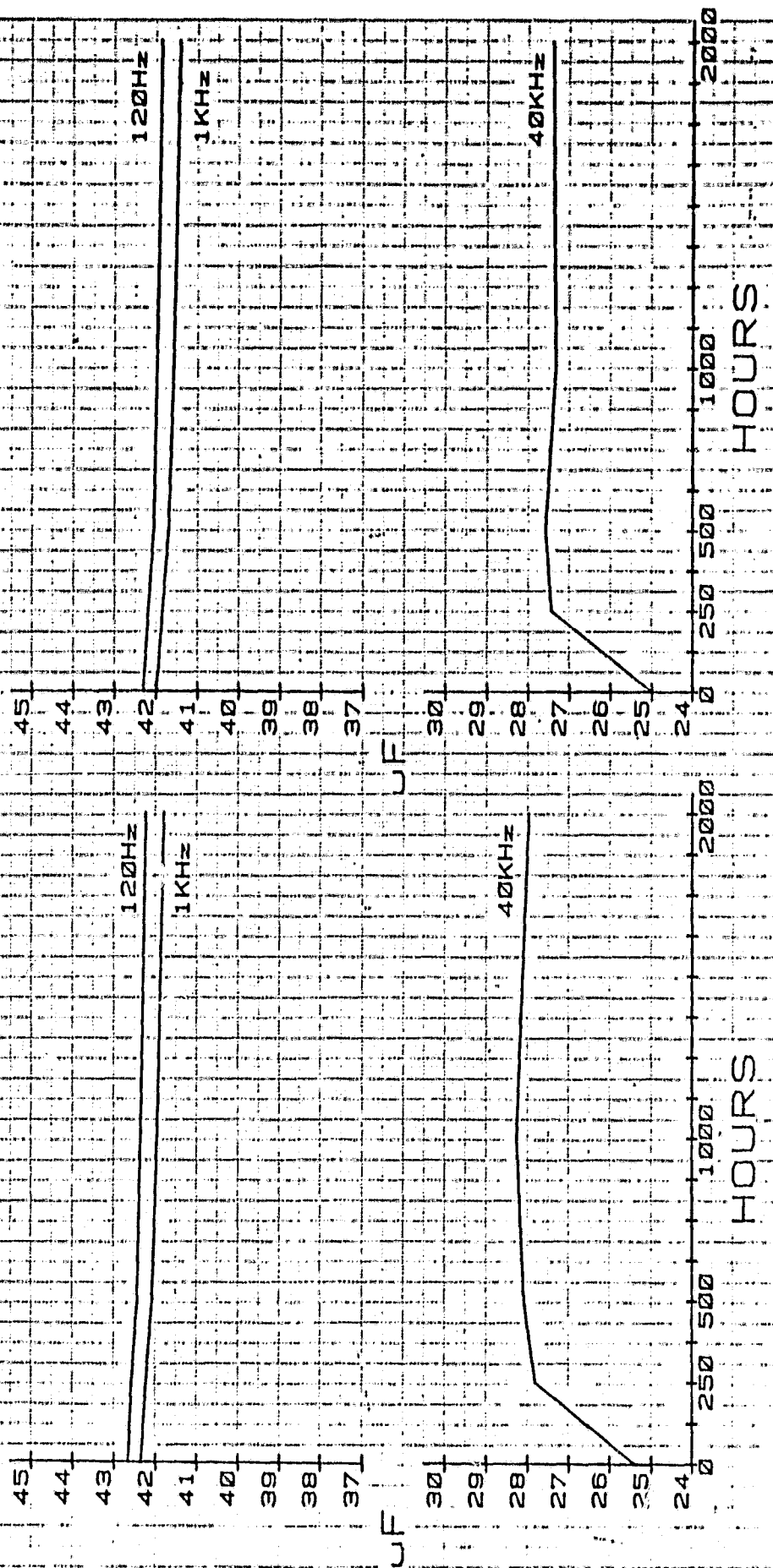


FIGURE 9



# LIFE TEST -- 125C, 0VDC

## AVERAGE OF

CONTROLS

SURGE SCREENED

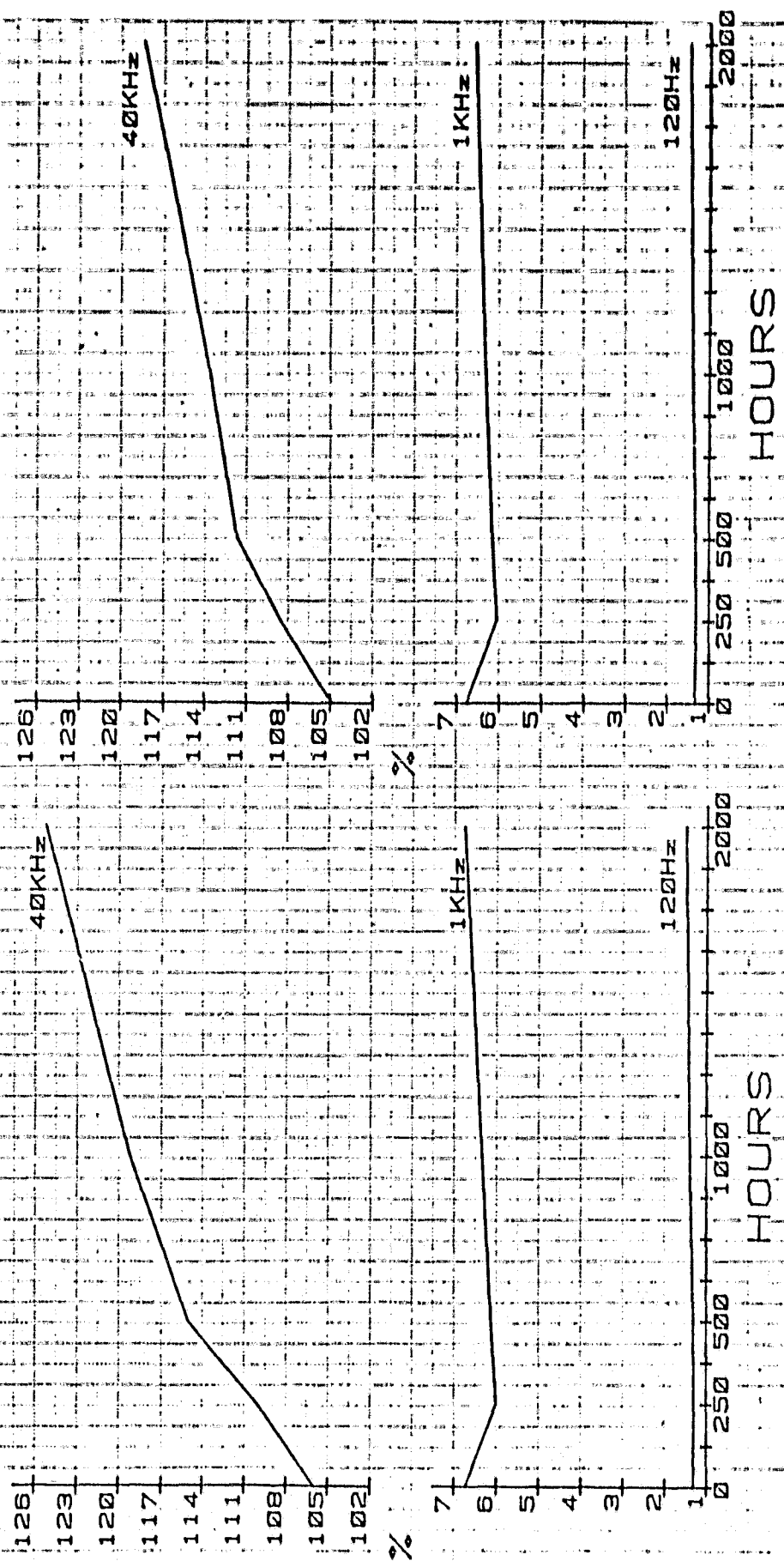


FIGURE 10

LIFE TEST -- 125C, 0VDC

AVERAGE ESR

CONTROLS SURGE SCREENED

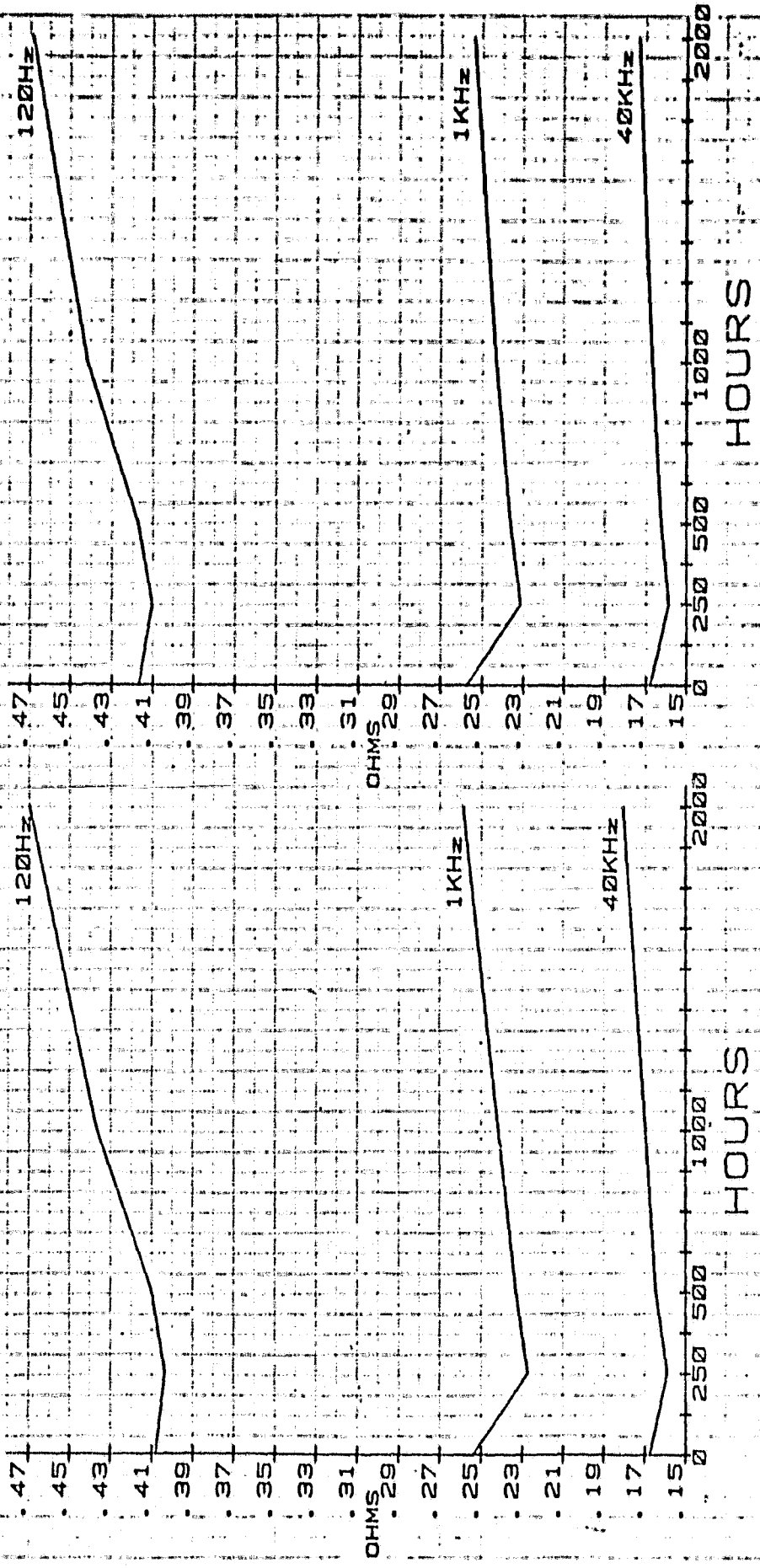


FIGURE 11

# LIFE TEST -- 125C, 0VDC

## MEDIAN DCL

CONTROLS

SURGE SCREENED

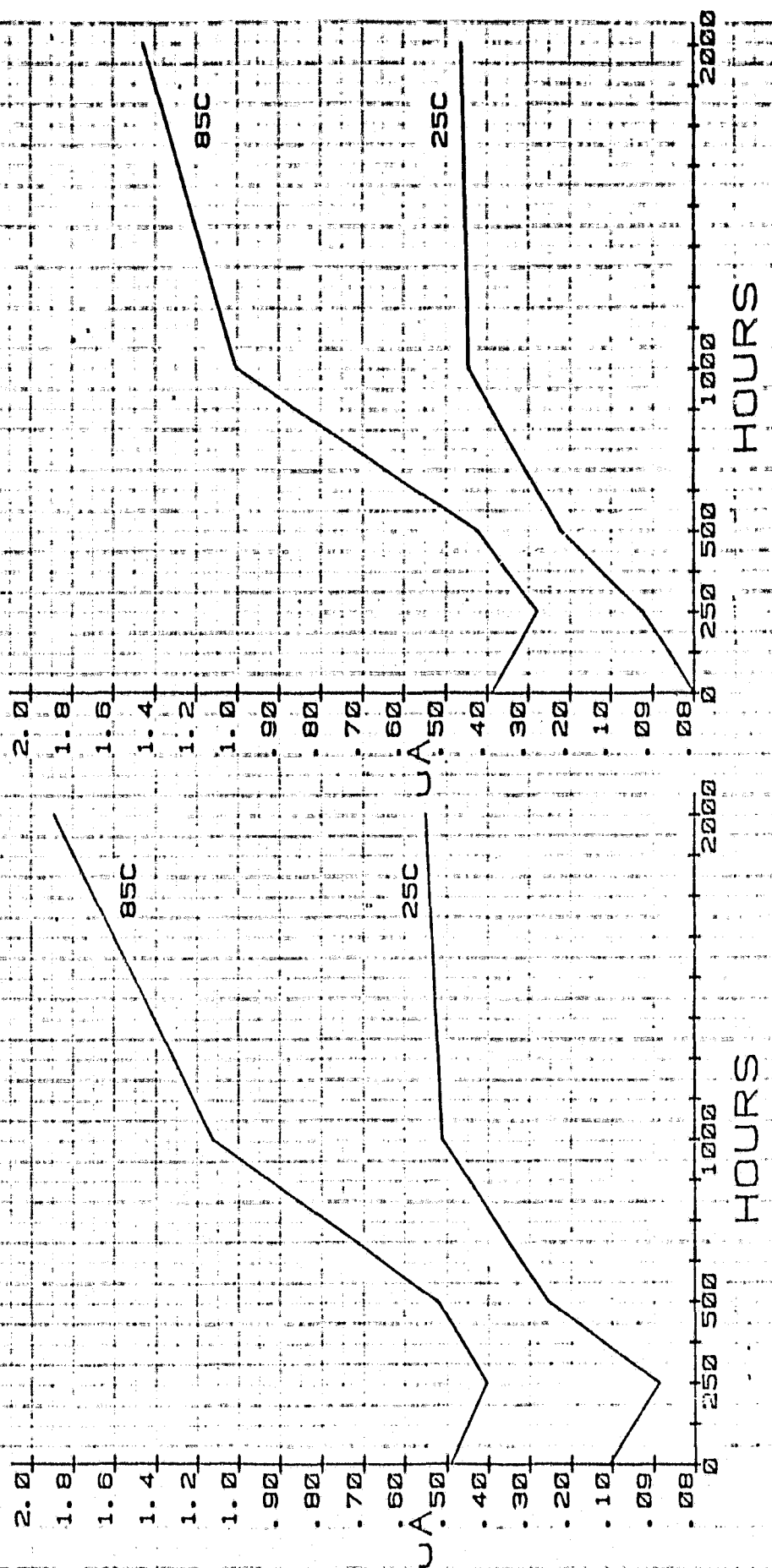


FIGURE 12

# LIFE TEST T-125C, 23VDC AVERAGE CAP

CONTROLS

SURGE SCREENED

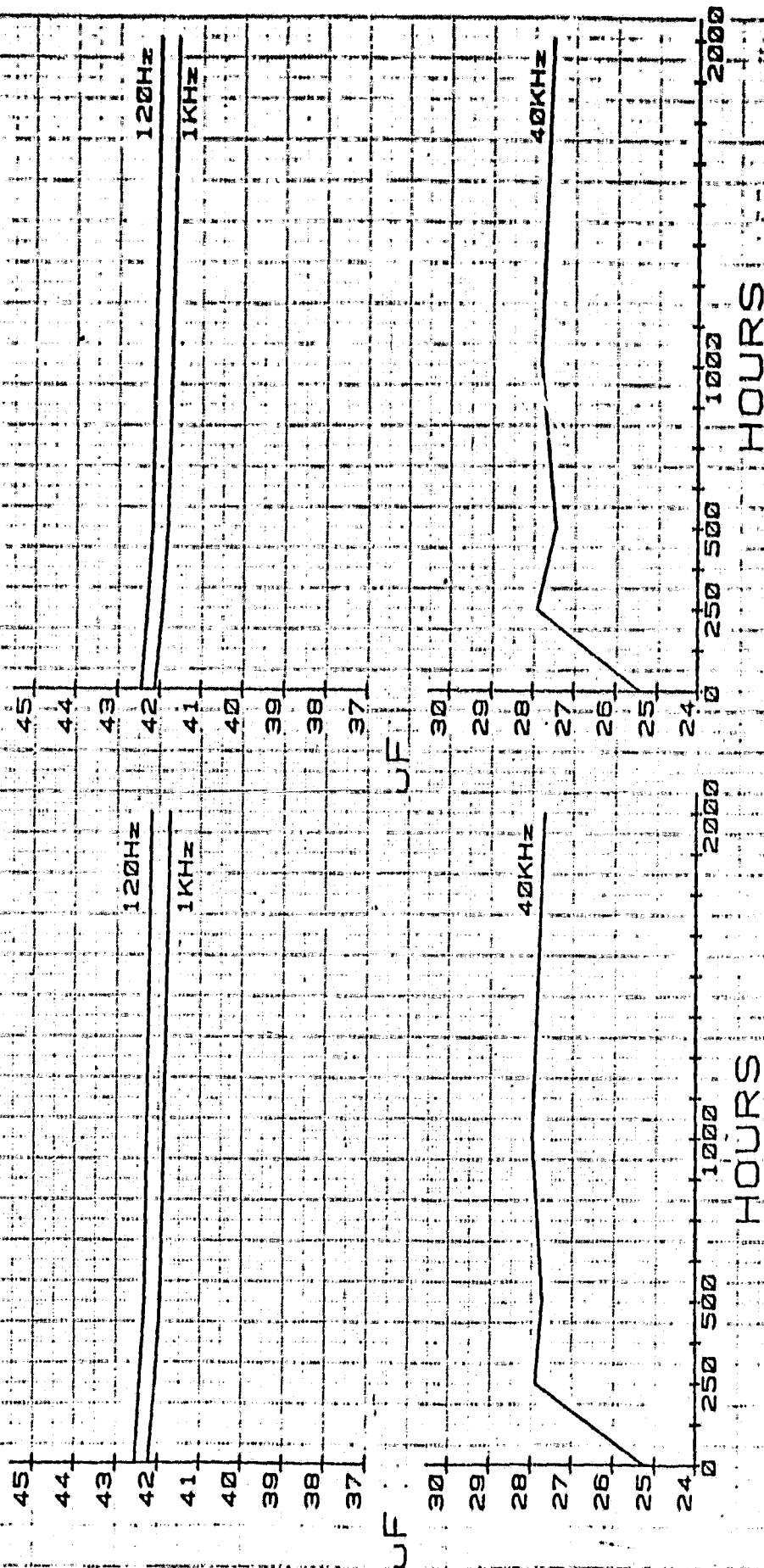


FIGURE 13

# LIFE-TEST -- 125C, 23VDC AVERAGE OF

CONTROLS

SURGE SCREENED

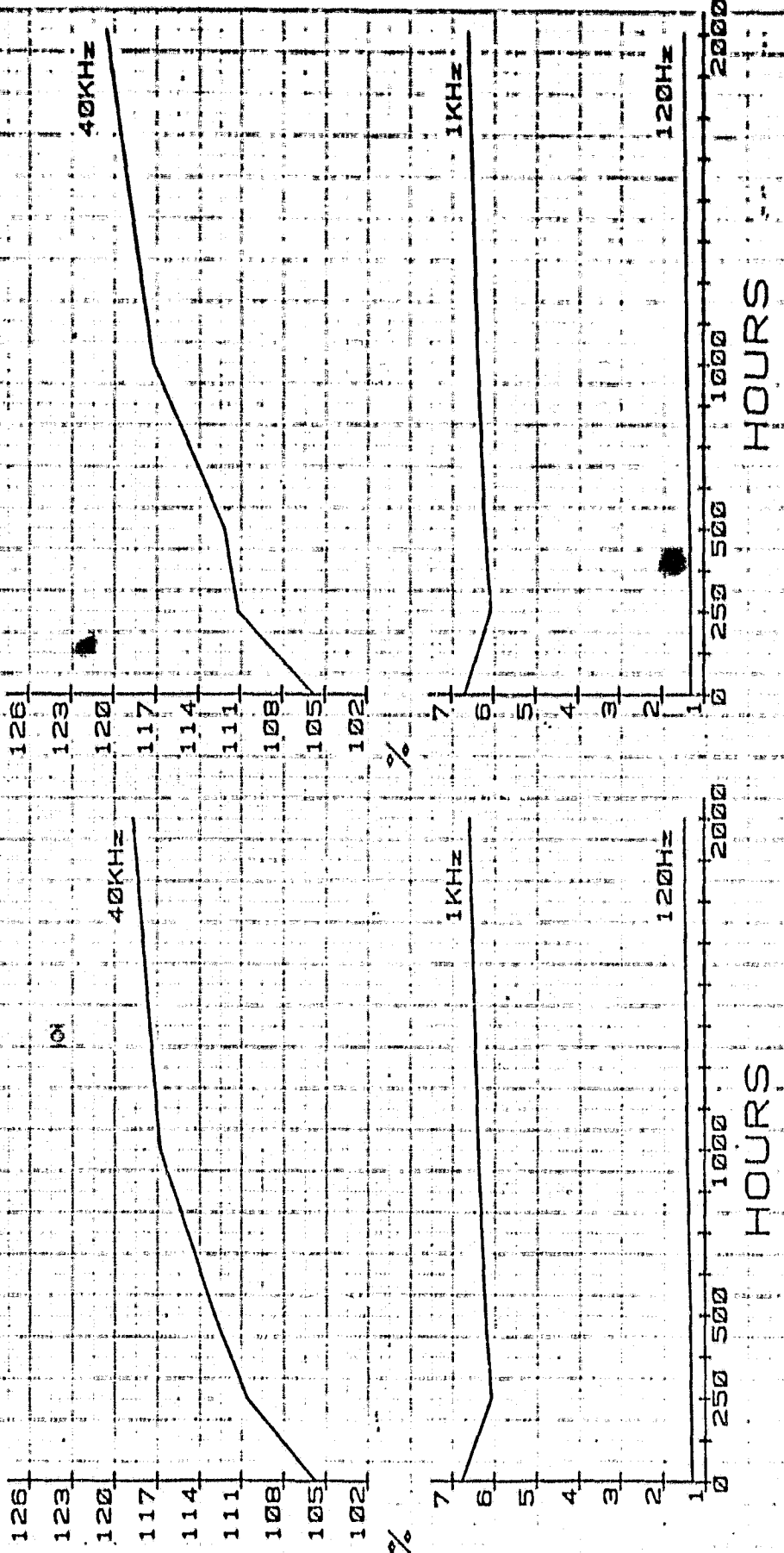


FIGURE 14

# LIFE TEST -- 125C, 23VDC

## AVERAGE ESR

CONTROLS

SURGE SCREENED

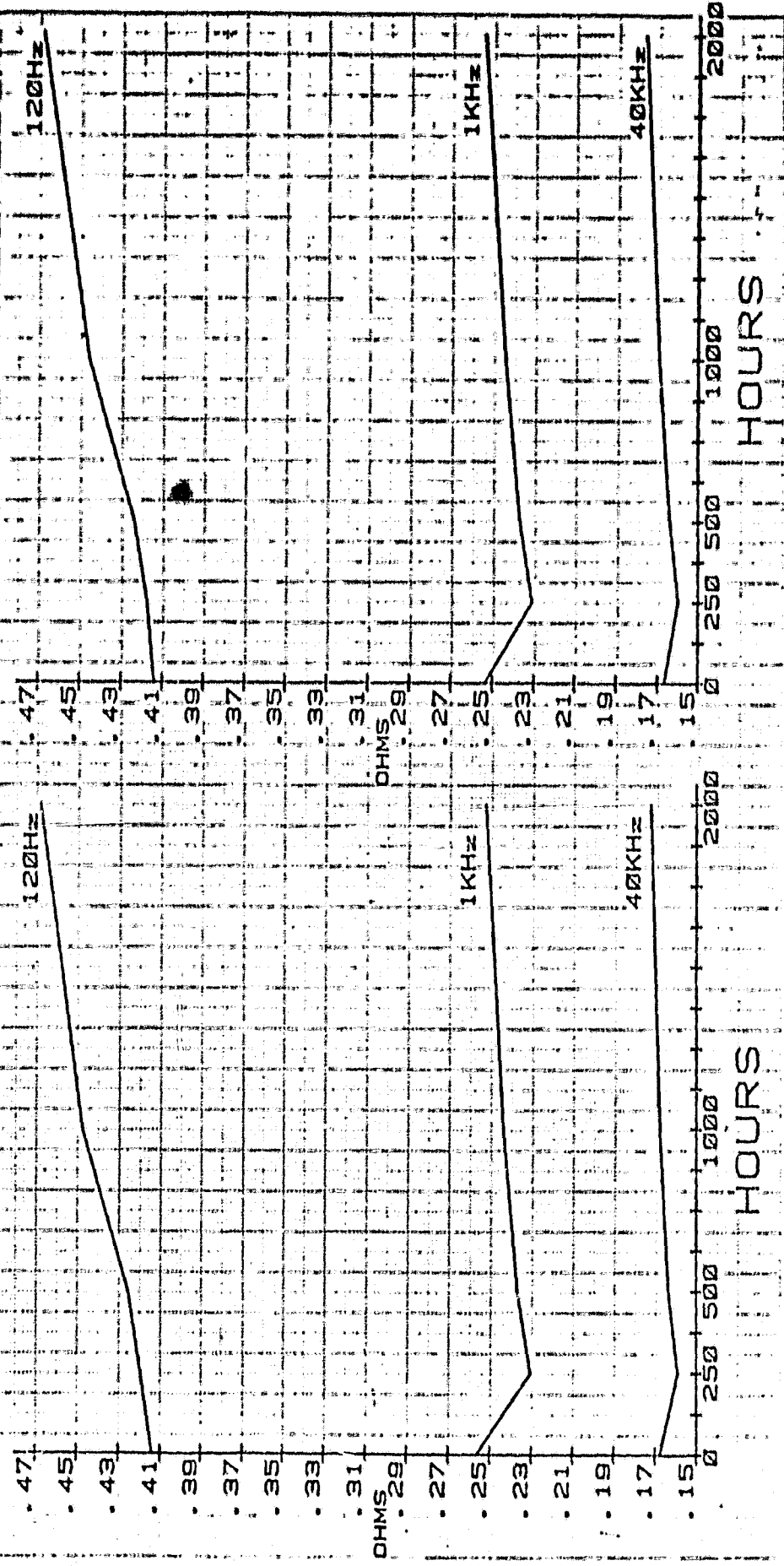


FIGURE 15

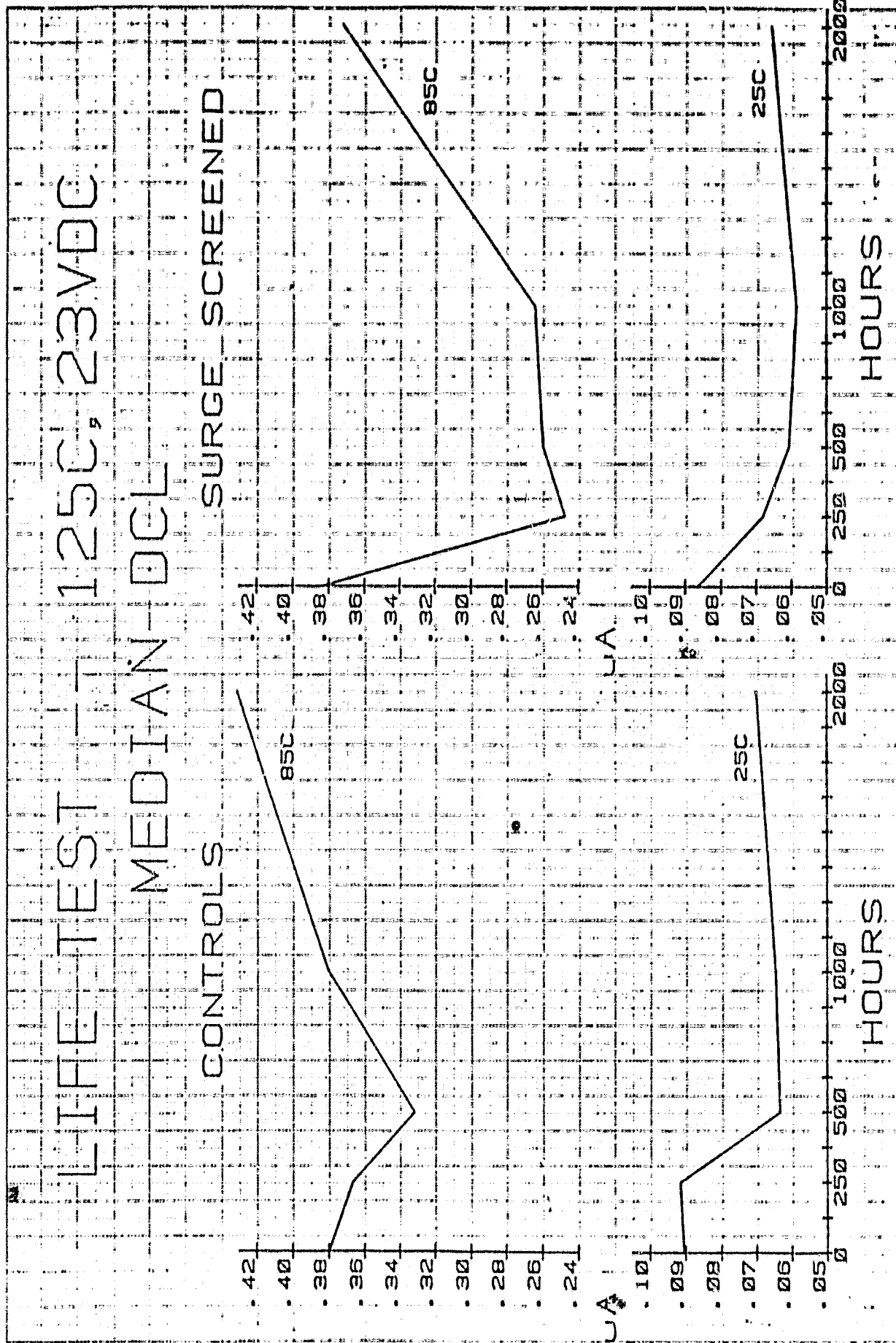


FIGURE 16



CYCLED LIFE TEST -- 1250, 23VDC

AVERAGE CAP

CONTROLS

SURGE SCREENED

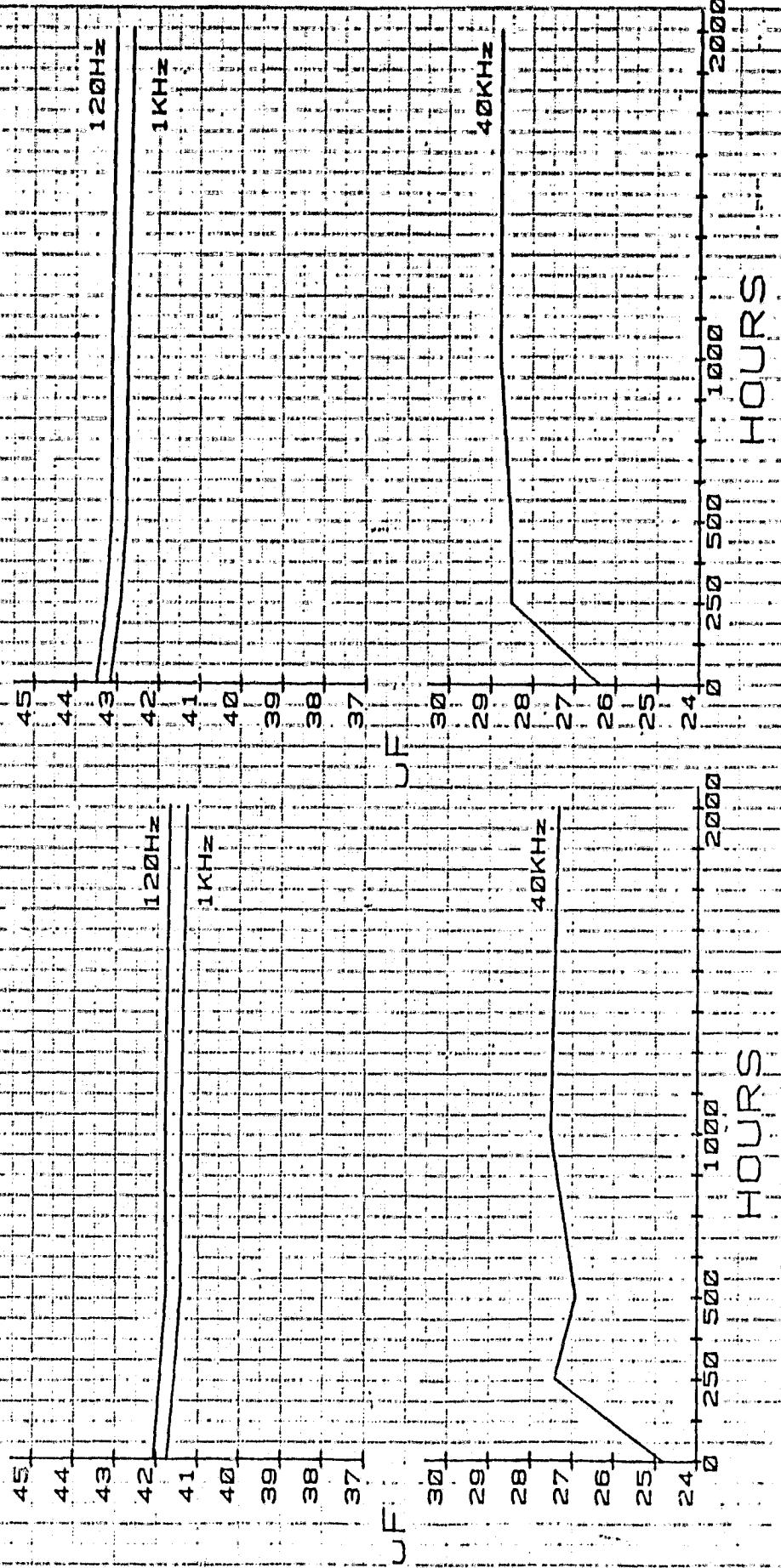


FIGURE 17



# CYCLED LIFE TEST -- 125°C, 23VDC AVERAGE DF

CONTROLS

SURGE SCREENED

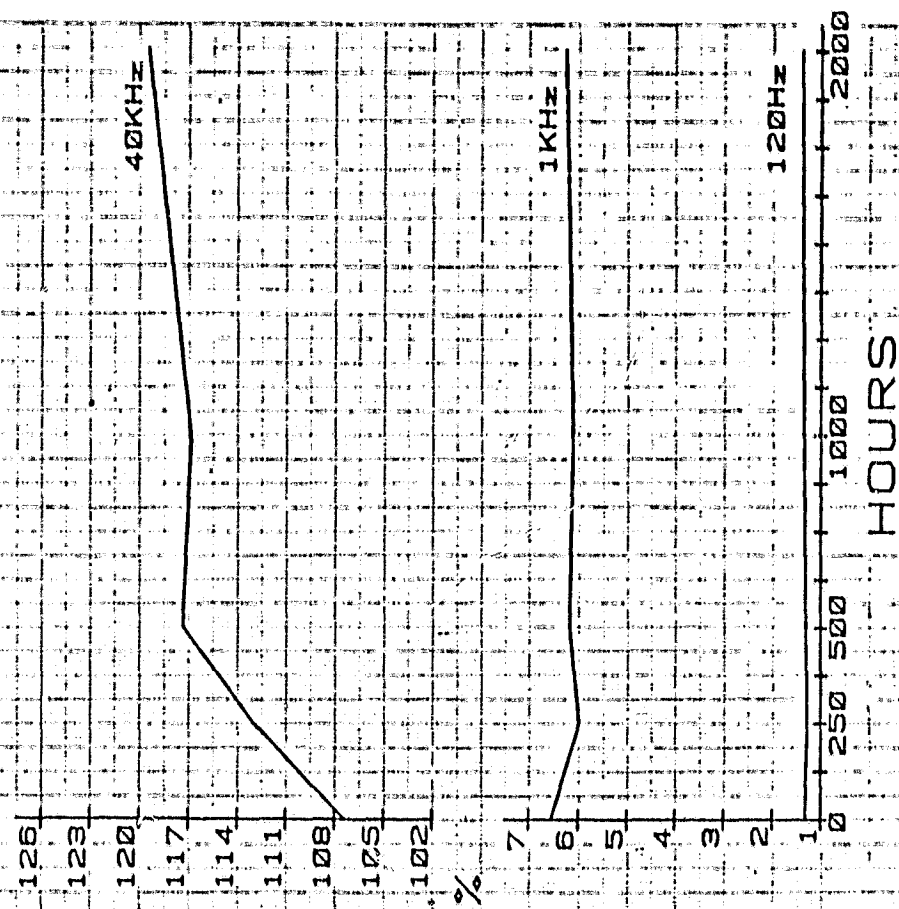
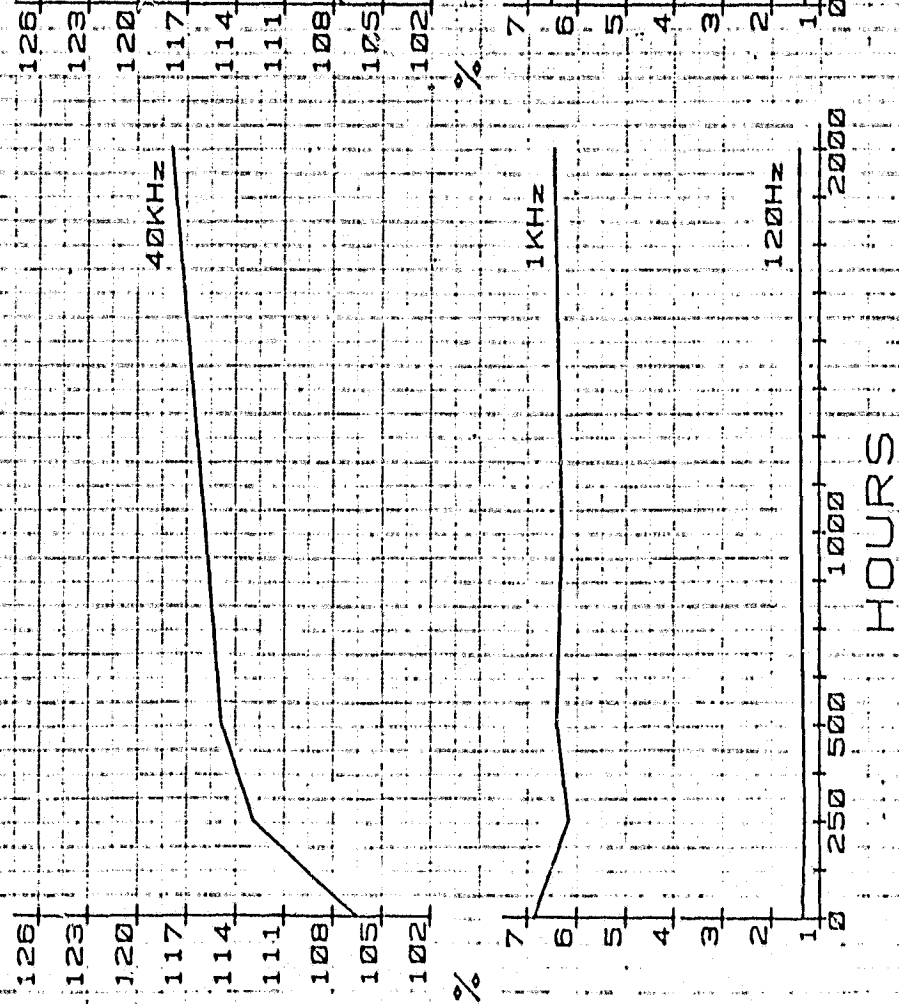


FIGURE 18

# CYCLED LIFE TEST -- 125C, 23VDC AVERAGE ESR

CONTROLS SURGE SCREENED

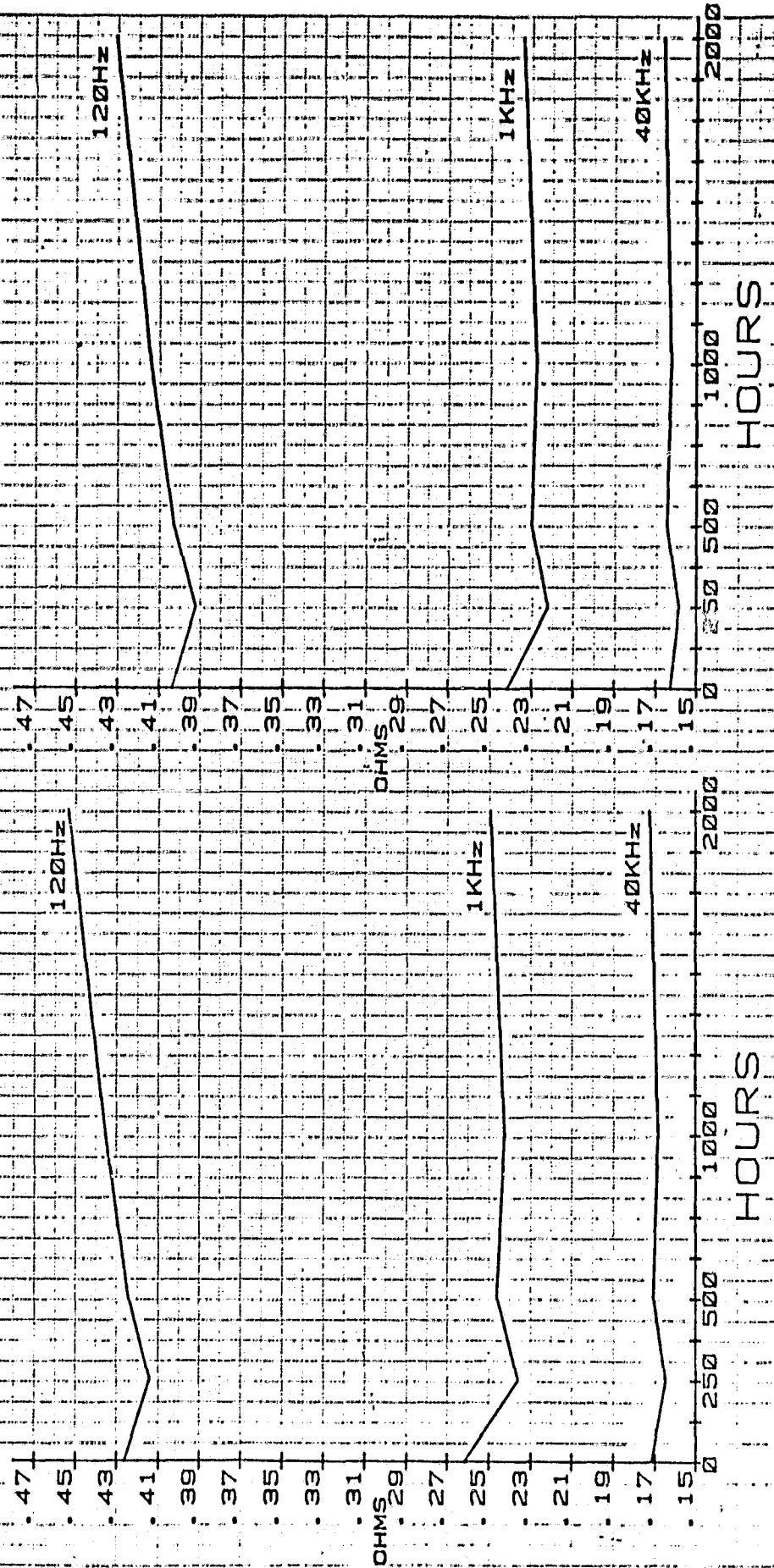


FIGURE 19

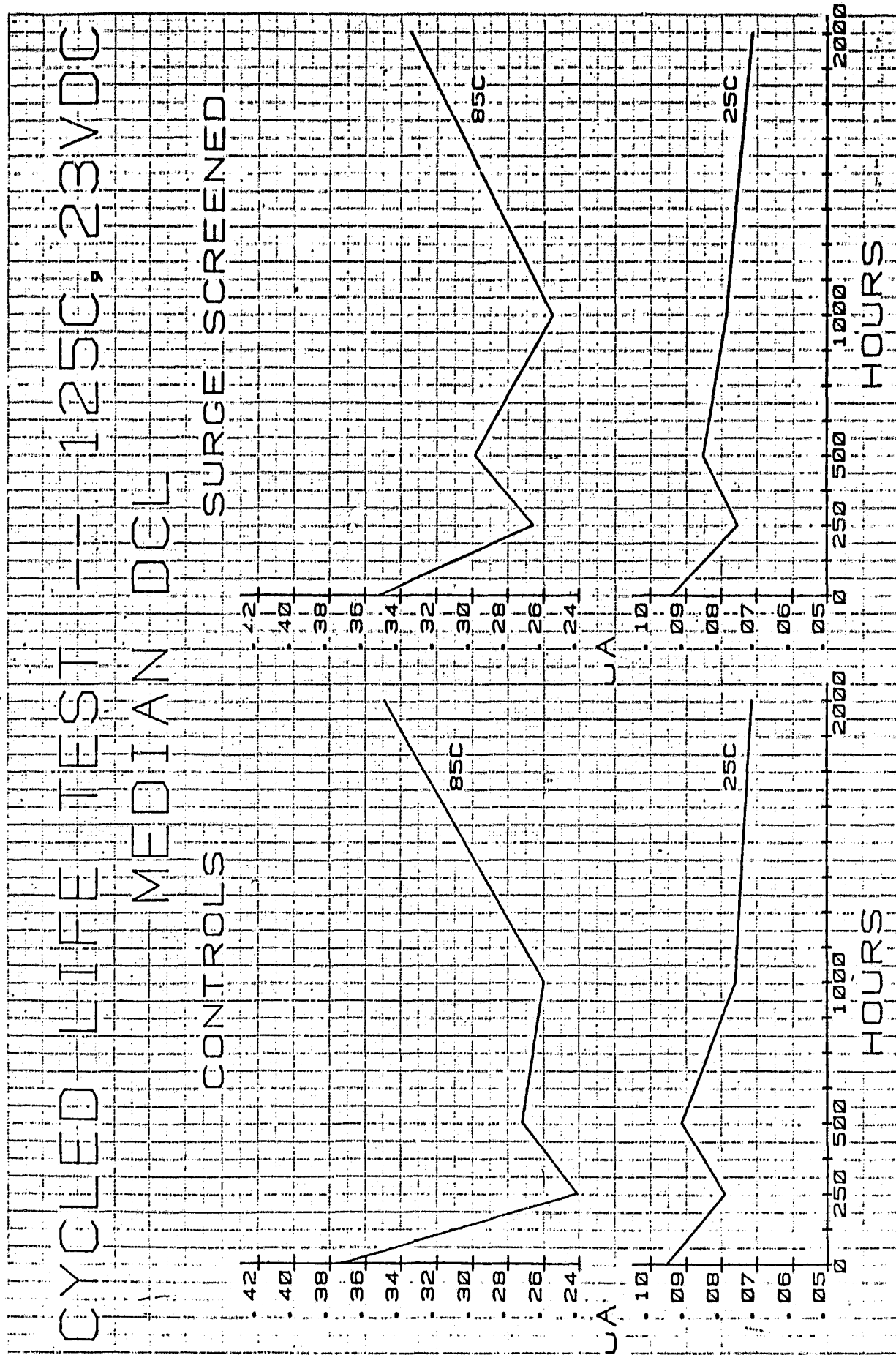


FIGURE 20

\*\*\* SPRAGUE ELECTRIC SURGE CURRENT TEST PROGRAM \*\*\*

===== LIFE TEST ----- 125C, 23VOLTS =====

----- CONTROL UNITS ----- SURGE SCREENED UNITS -----

| HOURS | CAPACITANCE (uF) |      | AVG:STD DEV |  |
|-------|------------------|------|-------------|--|
|       | 120Hz            | 1KHz | 40KHz       |  |

|      |              |              |              |  |
|------|--------------|--------------|--------------|--|
| 0    | 42.53 : 1.47 | 42.22 : 1.48 | 25.25 : 2.21 |  |
| 250  | 42.42 : 1.49 | 42.05 : 1.50 | 27.88 : 2.80 |  |
| 500  | 42.31 : 1.49 | 41.93 : 1.51 | 27.71 : 2.83 |  |
| 1000 | 42.26 : 1.51 | 41.85 : 1.53 | 27.96 : 2.96 |  |
| 2000 | 42.16 : 1.54 | 41.72 : 1.57 | 27.66 : 2.98 |  |

| HOURS | DISSIPATION FACTOR (%) |      | AVG:STD DEV |  |
|-------|------------------------|------|-------------|--|
|       | 120Hz                  | 1KHz | 40KHz       |  |

|      |             |             |                |  |
|------|-------------|-------------|----------------|--|
| 0    | 1.32 : 0.12 | 6.77 : 0.78 | 105.75 : 4.98  |  |
| 250  | 1.34 : 0.15 | 6.06 : 0.83 | 110.52 : 7.44  |  |
| 500  | 1.35 : 0.16 | 6.20 : 0.88 | 112.89 : 8.36  |  |
| 1000 | 1.42 : 0.18 | 6.37 : 0.94 | 116.74 : 9.93  |  |
| 2000 | 1.48 : 0.20 | 6.57 : 1.03 | 118.57 : 11.55 |  |

| HOURS | ESR (OHMS) |      | AVG:STD DEV |  |
|-------|------------|------|-------------|--|
|       | 120Hz      | 1KHz | 40KHz       |  |

|      |               |               |               |  |
|------|---------------|---------------|---------------|--|
| 0    | 0.414 : 0.049 | 0.257 : 0.037 | 0.168 : 0.016 |  |
| 250  | 0.420 : 0.057 | 0.230 : 0.039 | 0.159 : 0.018 |  |
| 500  | 0.425 : 0.061 | 0.237 : 0.041 | 0.164 : 0.020 |  |
| 1000 | 0.447 : 0.067 | 0.243 : 0.044 | 0.168 : 0.022 |  |
| 2000 | 0.468 : 0.076 | 0.252 : 0.048 | 0.172 : 0.025 |  |

| HOURS | DEL (uA)       |                         | FUSE BLOWS |  |
|-------|----------------|-------------------------|------------|--|
|       | MEDIAN<br>25°C | RATIO (MAX/MED)<br>85°C | CUMULATIVE |  |

|      |               |               |   |  |
|------|---------------|---------------|---|--|
| 0    | 0.091 : 5.64  | 0.380 : 44.37 | 0 |  |
| 250  | 0.091 : 4.79  | 0.367 : 37.82 | 0 |  |
| 500  | 0.063 : 7.41  | 0.332 : 47.81 | 0 |  |
| 1000 | 0.065 : 17.00 | 0.380 : 51.16 | 1 |  |
| 2000 | 0.070 : 8.36  | 0.431 : 53.83 | 3 |  |

| HOURS | CAPACITANCE (uF) |      | AVG:STD DEV |  |
|-------|------------------|------|-------------|--|
|       | 120Hz            | 1KHz | 40KHz       |  |

|      |              |              |              |  |
|------|--------------|--------------|--------------|--|
| 0    | 42.44 : 1.61 | 42.12 : 1.59 | 25.42 : 2.20 |  |
| 250  | 42.29 : 1.62 | 41.93 : 1.62 | 27.89 : 2.81 |  |
| 500  | 42.18 : 1.61 | 41.81 : 1.62 | 27.44 : 2.77 |  |
| 1000 | 42.11 : 1.62 | 41.71 : 1.63 | 27.80 : 2.88 |  |
| 2000 | 42.01 : 1.64 | 41.57 : 1.65 | 27.53 : 2.91 |  |

| HOURS | DISSIPATION FACTOR (%) |      | AVG:STD DEV |  |
|-------|------------------------|------|-------------|--|
|       | 120Hz                  | 1KHz | 40KHz       |  |

|      |             |             |                |  |
|------|-------------|-------------|----------------|--|
| 0    | 1.32 : 0.10 | 6.68 : 0.71 | 105.77 : 4.88  |  |
| 250  | 1.33 : 0.12 | 6.05 : 0.78 | 111.11 : 7.50  |  |
| 500  | 1.34 : 0.13 | 6.19 : 0.82 | 112.09 : 8.47  |  |
| 1000 | 1.41 : 0.15 | 6.36 : 0.88 | 117.13 : 10.13 |  |
| 2000 | 1.48 : 0.17 | 6.60 : 0.95 | 120.45 : 12.11 |  |

| HOURS | ESR (OHMS) |      | AVG:STD DEV |  |
|-------|------------|------|-------------|--|
|       | 120Hz      | 1KHz | 40KHz       |  |

|      |               |               |               |  |
|------|---------------|---------------|---------------|--|
| 0    | 0.414 : 0.042 | 0.253 : 0.034 | 0.167 : 0.015 |  |
| 250  | 0.417 : 0.050 | 0.231 : 0.037 | 0.160 : 0.018 |  |
| 500  | 0.424 : 0.053 | 0.237 : 0.039 | 0.164 : 0.019 |  |
| 1000 | 0.446 : 0.059 | 0.244 : 0.041 | 0.169 : 0.022 |  |
| 2000 | 0.468 : 0.067 | 0.254 : 0.045 | 0.176 : 0.027 |  |

| HOURS | DEL (uA)       |                         | FUSE BLOWS |  |
|-------|----------------|-------------------------|------------|--|
|       | MEDIAN<br>25°C | RATIO (MAX/MED)<br>85°C | CUMULATIVE |  |

|      |               |               |   |  |
|------|---------------|---------------|---|--|
| 0    | 0.087 : 4.867 | 0.384 : 18.75 | 0 |  |
| 250  | 0.068 : 5.092 | 0.248 : 22.38 | 0 |  |
| 500  | 0.061 : 5.750 | 0.260 : 27.48 | 0 |  |
| 1000 | 0.059 : 5.909 | 0.264 : 33.45 | 0 |  |
| 2000 | 0.066 : 5.753 | 0.372 : 48.06 | 0 |  |

\*\*\*\* SPRAGUE ELECTRIC SURGE CURRENT TEST PROGRAM \*\*\*\*

==== LIFE TEST --- 85C, 35VOLTS ===

CONTROL UNITS --- SURGE SCREENED UNITS ---

----- CAPACITANCE (uF) -----  
120Hz 1KHz 40KHz

----- CAPACITANCE (uF) -----  
120Hz 1KHz 40KHz

HOURS

0 42.80 : 1.54 42.48 : 1.52 25.77 : 2.01  
250 42.79 : 1.54 42.47 : 1.52 26.48 : 2.12  
500 42.74 : 1.53 42.42 : 1.52 26.20 : 2.07  
1000 42.70 : 1.53 42.39 : 1.52 26.45 : 2.12  
2000 42.68 : 1.54 42.36 : 1.53 26.71 : 2.19

0 42.50 : 1.44 42.16 : 1.44 25.17 : 1.83  
250 42.50 : 1.46 42.16 : 1.44 25.99 : 1.91  
500 42.43 : 1.45 42.11 : 1.44 25.68 : 1.86  
1000 42.39 : 1.46 42.07 : 1.44 25.93 : 1.93  
2000 42.36 : 1.45 42.04 : 1.44 26.35 : 2.02

----- DISSIPATION FACTOR (Z) -----  
120Hz 1KHz 40KHz

----- DISSIPATION FACTOR (Z) -----  
120Hz 1KHz 40KHz

0

1.31 : 0.10 6.57 : 0.66 105.00 : 4.276  
250 1.30 : 0.10 6.32 : 0.64 105.47 : 4.414  
500 1.29 : 0.10 6.37 : 0.66 105.38 : 4.479  
1000 1.26 : 0.10 6.26 : 0.65 105.14 : 4.594  
2000 1.27 : 0.10 6.16 : 0.66 105.54 : 4.895

0 1.38 : 0.13 6.83 : 0.76 106.70 : 5.683  
250 1.34 : 0.12 6.50 : 0.72 106.73 : 5.776  
500 1.33 : 0.12 6.56 : 0.74 106.74 : 5.815  
1000 1.29 : 0.12 6.44 : 0.73 106.58 : 5.872  
2000 1.30 : 0.12 6.36 : 0.74 107.73 : 6.101

----- ESR (OHMS) -----  
120Hz 1KHz 40KHz

----- ESR (OHMS) -----  
120Hz 1KHz 40KHz

0

0.407 : 0.038 0.247 : 0.031 0.163 : 0.014  
250 0.403 : 0.037 0.238 : 0.030 0.159 : 0.014  
500 0.402 : 0.038 0.240 : 0.030 0.161 : 0.014  
1000 0.391 : 0.038 0.236 : 0.030 0.159 : 0.015  
2000 0.395 : 0.038 0.232 : 0.031 0.158 : 0.015

0 0.430 : 0.048 0.259 : 0.033 0.169 : 0.015  
250 0.418 : 0.041 0.246 : 0.031 0.164 : 0.014  
500 0.415 : 0.041 0.249 : 0.032 0.166 : 0.015  
1000 0.405 : 0.041 0.244 : 0.032 0.164 : 0.015  
2000 0.407 : 0.042 0.242 : 0.032 0.164 : 0.015

----- DCL (uA) -----  
MEDIAN :: RATIO (MAX/MED) 85°C  
25°C CUMULATIVE

----- DCL (uA) -----  
MEDIAN :: RATIO (MAX/MED) 85°C  
25°C CUMULATIVE

0

0.092 : 2.197 0.343 : 21.43 0  
250 0.069 : 4.015 0.320 : 14.53 0  
500 0.061 : 4.329 0.275 : 19.02 0  
1000 0.070 : 4.229 0.285 : 19.02 0  
2000 0.062 : 4.751 0.251 : 21.67 0

0 0.095 : 4.695 0.426 : 30.62 0  
250 0.073 : 4.329 0.303 : 31.74 0  
500 0.068 : 4.786 0.308 : 30.26 0  
1000 0.076 : 4.172 0.338 : 28.77 0  
2000 0.069 : 5.723 0.331 : 41.87 0

--- FUSE BLOWS ---

--- FUSE BLOWS ---

\*\*\* SPRAGUE ELECTRIC SURGE CURRENT TEST PROGRAM \*\*\*

=== LIFE TEST --- 125C, 0VOLTS ===

CONTROL UNITS --- SURGE SCREENED UNITS ---

| HOURS | CAPACITANCE (uf) |      | AVG:STD DEV |  |
|-------|------------------|------|-------------|--|
|       | 120Hz            | 1KHz | 40KHz       |  |

|      |              |              |              |  |
|------|--------------|--------------|--------------|--|
| 0    | 42.66 : 1.49 | 42.34 : 1.48 | 25.39 : 2.22 |  |
| 250  | 42.57 : 1.50 | 42.22 : 1.50 | 27.82 : 2.68 |  |
| 500  | 42.43 : 1.50 | 42.08 : 1.50 | 28.07 : 2.83 |  |
| 1000 | 42.35 : 1.50 | 41.96 : 1.50 | 28.27 : 2.91 |  |
| 2000 | 42.23 : 1.51 | 41.80 : 1.52 | 27.97 : 3.06 |  |

| HOURS | DISSIPATION FACTOR (Z) |      | AVG:STD DEV |  |
|-------|------------------------|------|-------------|--|
|       | 120Hz                  | 1KHz | 40KHz       |  |

|      |             |             |                |  |
|------|-------------|-------------|----------------|--|
| 0    | 1.31 : 0.12 | 6.73 : 0.83 | 106.02 : 5.09  |  |
| 250  | 1.29 : 0.13 | 6.00 : 0.83 | 110.09 : 7.02  |  |
| 500  | 1.31 : 0.15 | 6.13 : 0.89 | 115.06 : 8.33  |  |
| 1000 | 1.39 : 0.17 | 6.34 : 0.98 | 119.18 : 10.12 |  |
| 2000 | 1.49 : 0.21 | 6.76 : 1.20 | 125.23 : 12.71 |  |

| HOURS | ESR (OHMS) |      | AVG:STD DEV |  |
|-------|------------|------|-------------|--|
|       | 120Hz      | 1KHz | 40KHz       |  |

|      |               |               |               |  |
|------|---------------|---------------|---------------|--|
| 0    | 0.408 : 0.046 | 0.254 : 0.038 | 0.168 : 0.018 |  |
| 250  | 0.404 : 0.050 | 0.227 : 0.038 | 0.159 : 0.020 |  |
| 500  | 0.410 : 0.055 | 0.233 : 0.040 | 0.165 : 0.022 |  |
| 1000 | 0.437 : 0.063 | 0.242 : 0.043 | 0.170 : 0.025 |  |
| 2000 | 0.470 : 0.075 | 0.259 : 0.052 | 0.181 : 0.031 |  |

| HOURS | DCL (uA) |                 | FUSE BLOWS |            |
|-------|----------|-----------------|------------|------------|
|       | MEDIAN   | RATIO (MAX/MED) | 85°C       | CUMULATIVE |

|      |               |               |   |  |
|------|---------------|---------------|---|--|
| 0    | 0.107 : 3.822 | 0.492 : 11.80 | 0 |  |
| 250  | 0.089 : 3.984 | 0.404 : 6.89  | 0 |  |
| 500  | 0.255 : 6.090 | 0.521 : 8.14  | 0 |  |
| 1000 | 0.511 : 2.682 | 1.122 : 6.11  | 0 |  |
| 2000 | 0.548 : 8.869 | 1.890 : 13.76 | 0 |  |

| HOURS | CAPACITANCE (uf) |      | AVG:STD DEV |  |
|-------|------------------|------|-------------|--|
|       | 120Hz            | 1KHz | 40KHz       |  |

|      |              |              |              |  |
|------|--------------|--------------|--------------|--|
| 0    | 42.30 : 1.68 | 41.99 : 1.68 | 25.01 : 2.18 |  |
| 250  | 42.19 : 1.70 | 41.85 : 1.70 | 27.44 : 2.72 |  |
| 500  | 42.07 : 1.70 | 41.71 : 1.70 | 27.59 : 2.83 |  |
| 1000 | 41.99 : 1.71 | 41.59 : 1.71 | 27.34 : 2.80 |  |
| 2000 | 41.89 : 1.72 | 41.45 : 1.73 | 27.42 : 2.84 |  |

| HOURS | DISSIPATION FACTOR (Z) |      | AVG:STD DEV |  |
|-------|------------------------|------|-------------|--|
|       | 120Hz                  | 1KHz | 40KHz       |  |

|      |             |             |                |  |
|------|-------------|-------------|----------------|--|
| 0    | 1.33 : 0.10 | 6.76 : 0.76 | 104.88 : 4.947 |  |
| 250  | 1.30 : 0.12 | 6.05 : 0.79 | 108.58 : 5.529 |  |
| 500  | 1.32 : 0.14 | 6.17 : 0.84 | 111.67 : 6.063 |  |
| 1000 | 1.39 : 0.16 | 6.33 : 0.88 | 113.64 : 7.059 |  |
| 2000 | 1.48 : 0.18 | 6.59 : 0.93 | 118.52 : 8.186 |  |

| HOURS | ESR (OHMS) |      | AVG:STD DEV |  |
|-------|------------|------|-------------|--|
|       | 120Hz      | 1KHz | 40KHz       |  |

|      |               |               |               |  |
|------|---------------|---------------|---------------|--|
| 0    | 0.417 : 0.042 | 0.257 : 0.036 | 0.168 : 0.015 |  |
| 250  | 0.410 : 0.049 | 0.231 : 0.037 | 0.159 : 0.017 |  |
| 500  | 0.418 : 0.054 | 0.236 : 0.039 | 0.163 : 0.018 |  |
| 1000 | 0.442 : 0.062 | 0.244 : 0.041 | 0.167 : 0.020 |  |
| 2000 | 0.469 : 0.070 | 0.254 : 0.043 | 0.174 : 0.022 |  |

| HOURS | DCL (uA) |                 | FUSE BLOWS |            |
|-------|----------|-----------------|------------|------------|
|       | MEDIAN   | RATIO (MAX/MED) | 85°C       | CUMULATIVE |

|      |               |               |   |  |
|------|---------------|---------------|---|--|
| 0    | 0.080 : 4.40  | 0.390 : 17.33 | 0 |  |
| 250  | 0.092 : 1.75  | 0.278 : 7.73  | 0 |  |
| 500  | 0.222 : 1.59  | 0.424 : 4.18  | 0 |  |
| 1000 | 0.446 : 3.74  | 1.006 : 5.18  | 0 |  |
| 2000 | 0.464 : 10.13 | 1.460 : 2.45  | 0 |  |

\*\*\* SPRAGUE ELECTRIC SURGE CURRENT TEST PROGRAM \*\*\*

===== CYCLED LIFE TEST ----- 1250, 23VOLTS =====

----- CONTROL UNITS ----- SURGE SCREENED UNITS -----

| HOURS | CAPACITANCE (uf) |              | AVG:STD DEV  |       |
|-------|------------------|--------------|--------------|-------|
|       | 120Hz            | 1KHz         | 40KHz        | 40KHz |
| 0     | 42.05 : 1.04     | 41.74 : 1.03 | 24.80 : 1.70 |       |
| 250   | 41.91 : 1.04     | 41.56 : 1.04 | 27.41 : 2.11 |       |
| 500   | 41.77 : 1.04     | 41.41 : 1.04 | 26.92 : 2.11 |       |
| 1000  | 41.78 : 1.05     | 41.40 : 1.04 | 27.52 : 2.19 |       |
| 2000  | 41.70 : 1.07     | 41.28 : 1.07 | 27.34 : 2.22 |       |

| HOURS | DISSIPATION FACTOR (Z) |             | AVG:STD DEV    |       |
|-------|------------------------|-------------|----------------|-------|
|       | 120Hz                  | 1KHz        | 40KHz          | 40KHz |
| 0     | 1.35 : 0.11            | 6.84 : 0.74 | 106.54 : 5.58  |       |
| 250   | 1.31 : 0.12            | 6.15 : 0.76 | 112.91 : 8.45  |       |
| 500   | 1.33 : 0.13            | 6.39 : 0.82 | 114.84 : 9.33  |       |
| 1000  | 1.37 : 0.14            | 6.29 : 0.81 | 115.78 : 10.19 |       |
| 2000  | 1.42 : 0.15            | 6.45 : 0.87 | 117.88 : 11.17 |       |

| HOURS | ESR (OHMS)    |               | AVG:STD DEV   |       |
|-------|---------------|---------------|---------------|-------|
|       | 120Hz         | 1KHz          | 40KHz         | 40KHz |
| 0     | 0.426 : 0.038 | 0.261 : 0.032 | 0.172 : 0.015 |       |
| 250   | 0.414 : 0.043 | 0.236 : 0.033 | 0.165 : 0.017 |       |
| 500   | 0.424 : 0.047 | 0.246 : 0.035 | 0.171 : 0.019 |       |
| 1000  | 0.435 : 0.049 | 0.242 : 0.035 | 0.168 : 0.020 |       |
| 2000  | 0.453 : 0.054 | 0.249 : 0.037 | 0.173 : 0.022 |       |

| HOURS | DCL (uA)      |                      | FUSE BLOWS |            |
|-------|---------------|----------------------|------------|------------|
|       | MEDIAN : 25°C | RATIO (MAX/MED) 85°C | CUMULATIVE | CUMULATIVE |
| 0     | 0.096 : 4.63  | 0.373 : 39.81        | 0          | 0          |
| 250   | 0.079 : 5.27  | 0.241 : 48.51        | 1          | 1          |
| 500   | 0.091 : 5.09  | 0.272 : 58.13        | 1          | 2          |
| 1000  | 0.076 : 7.62  | 0.260 : 64.12        | 1          | 5          |
| 2000  | 0.071 : 10.28 | 0.349 : 61.03        | 4          | 8          |

\*\*\* SPRAGUE ELECTRIC SURGE CURRENT TEST PROGRAM \*\*\*

CONTROL UNITS

11/14/79

LINE TEST -- 1250.23VOLTS

| HOURS | UNIT NO. | CAPACITANCE (uf)---- |       |       |  | DISSIPATION FACTOR (Z)--- |      |        |  | ESR (OHMS)----- |       |       |  | DCL (uA)---- |       | FUSE BLOW |
|-------|----------|----------------------|-------|-------|--|---------------------------|------|--------|--|-----------------|-------|-------|--|--------------|-------|-----------|
|       |          | 120Hz                | 1KHz  | 40KHz |  | 120Hz                     | 1KHz | 40KHz  |  | 120Hz           | 1KHz  | 40KHz |  | 25C          | 85C   |           |
| 0     | 1        | 41.34                | 41.08 | 23.92 |  | 1.25                      | 7.02 | 105.21 |  | 0.400           | 0.272 | 0.175 |  | 0.111        | 0.780 |           |
| 250   |          | 41.24                | 40.93 | 26.16 |  | 1.24                      | 6.19 | 104.72 |  | 0.398           | 0.241 | 0.159 |  | 0.126        | 0.435 |           |
| 500   |          | 41.14                | 40.82 | 25.82 |  | 1.26                      | 6.41 | 105.39 |  | 0.412           | 0.250 | 0.162 |  | 0.075        | 0.489 |           |
| 1000  |          | 41.06                | 40.70 | 25.66 |  | 1.36                      | 6.71 | 107.15 |  | 0.439           | 0.263 | 0.166 |  | 0.098        | 1.074 |           |
| 2000  |          | 41.02                | 40.60 | 25.34 |  | 1.45                      | 7.06 | 107.15 |  | 0.469           | 0.277 | 0.168 |  | 0.064        | 0.908 |           |
| 0     | 2        | 42.14                | 41.87 | 25.22 |  | 1.22                      | 6.50 | 107.75 |  | 0.383           | 0.247 | 0.170 |  | 0.095        | 0.290 |           |
| 250   |          | 42.06                | 41.78 | 28.34 |  | 1.17                      | 5.59 | 114.67 |  | 0.370           | 0.213 | 0.161 |  | 0.107        | 0.240 |           |
| 500   |          | 41.98                | 41.69 | 28.32 |  | 1.18                      | 5.67 | 117.76 |  | 0.372           | 0.217 | 0.165 |  | 0.060        | 0.229 |           |
| 1000  |          | 41.92                | 41.62 | 28.63 |  | 1.22                      | 5.78 | 122.14 |  | 0.385           | 0.221 | 0.170 |  | 0.059        | 0.229 |           |
| 2000  |          | 41.91                | 41.57 | 28.62 |  | 1.25                      | 5.82 | 122.88 |  | 0.397           | 0.223 | 0.171 |  | 0.058        | 0.228 |           |
| 0     | 3        | 42.58                | 42.25 | 24.29 |  | 1.41                      | 7.41 | 111.11 |  | 0.438           | 0.279 | 0.182 |  | 0.188        | 3.020 |           |
| 250   |          | 42.49                | 42.12 | 26.94 |  | 1.38                      | 6.46 | 115.60 |  | 0.431           | 0.244 | 0.171 |  | 0.190        | 2.540 |           |
| 500   |          | 42.39                | 42.02 | 26.90 |  | 1.38                      | 6.52 | 117.60 |  | 0.433           | 0.247 | 0.174 |  | 0.141        | 3.020 |           |
| 1000  |          | 42.33                | 41.95 | 27.34 |  | 1.42                      | 6.59 | 121.99 |  | 0.444           | 0.250 | 0.178 |  | 0.153        | 3.800 |           |
| 2000  |          | 42.31                | 41.90 | 27.55 |  | 1.46                      | 6.67 | 126.18 |  | 0.458           | 0.253 | 0.182 |  | 0.183        | 6.040 |           |
| 0     | 4        | 40.01                | 39.68 | 21.03 |  | 1.49                      | 8.28 | 107.82 |  | 0.493           | 0.332 | 0.204 |  | 0.085        | 0.150 |           |
| 250   |          | 39.84                | 39.46 | 23.02 |  | 1.53                      | 7.57 | 115.35 |  | 0.509           | 0.305 | 0.199 |  | 0.105        | 0.184 |           |
| 500   |          | 39.73                | 39.34 | 22.93 |  | 1.56                      | 7.78 | 119.00 |  | 0.522           | 0.315 | 0.206 |  | 0.057        | 0.163 |           |
| 1000  |          | 39.65                | 39.22 | 23.23 |  | 1.64                      | 8.04 | 126.32 |  | 0.549           | 0.326 | 0.216 |  | 0.056        | 0.188 |           |
| 2000  |          | 39.58                | 39.11 | 23.00 |  | 1.75                      | 8.45 | 135.68 |  | 0.587           | 0.344 | 0.235 |  | 0.060        | 0.184 |           |
| 0     | 5        | 40.74                | 40.33 | 21.87 |  | 1.60                      | 8.26 | 103.88 |  | 0.521           | 0.326 | 0.189 |  | 0.108        | 0.260 |           |
| 250   |          | 40.66                | 40.26 | 23.86 |  | 1.59                      | 7.40 | 104.76 |  | 0.520           | 0.293 | 0.175 |  | 0.116        | 0.261 |           |
| 500   |          | 40.54                | 40.08 | 23.76 |  | 1.60                      | 7.52 | 105.95 |  | 0.525           | 0.299 | 0.177 |  | 0.066        | 0.239 |           |
| 1000  |          | 40.47                | 39.98 | 23.95 |  | 1.66                      | 7.63 | 107.65 |  | 0.543           | 0.304 | 0.179 |  | 0.069        | 0.261 |           |
| 2000  |          | 40.43                | 39.90 | 24.05 |  | 1.71                      | 7.68 | 108.35 |  | 0.561           | 0.306 | 0.179 |  | 0.079        | 0.352 |           |
| 0     | 6        | 42.72                | 42.47 | 25.84 |  | 1.20                      | 6.40 | 111.70 |  | 0.372           | 0.240 | 0.172 |  | 0.153        | 1.490 |           |
| 250   |          | 42.63                | 42.34 | 28.98 |  | 1.18                      | 5.58 | 118.22 |  | 0.367           | 0.210 | 0.162 |  | 0.140        | 1.092 |           |
| 500   |          | 42.55                | 42.27 | 28.86 |  | 1.18                      | 5.68 | 120.88 |  | 0.367           | 0.214 | 0.167 |  | 0.097        | 1.158 |           |
| 1000  |          | 42.52                | 42.22 | 29.14 |  | 1.21                      | 5.77 | 124.68 |  | 0.376           | 0.218 | 0.170 |  | 0.096        | 1.268 |           |
| 2000  |          | 42.51                | 42.19 | 29.17 |  | 1.23                      | 5.82 | 126.35 |  | 0.384           | 0.220 | 0.172 |  | 0.105        | 1.718 |           |
| 0     | 7        | 41.78                | 41.42 | 23.72 |  | 1.50                      | 7.57 | 118.63 |  | 0.475           | 0.291 | 0.199 |  | 0.096        | 0.240 |           |
| 250   |          | 41.69                | 41.28 | 26.19 |  | 1.52                      | 6.95 | 130.35 |  | 0.484           | 0.268 | 0.198 |  | 0.113        | 0.273 |           |
| 500   |          | 41.57                | 41.17 | 25.98 |  | 1.52                      | 7.11 | 133.46 |  | 0.486           | 0.275 | 0.204 |  | 0.071        | 0.277 |           |
| 1000  |          | 41.50                | 41.07 | 26.08 |  | 1.60                      | 7.39 | 139.84 |  | 0.510           | 0.286 | 0.213 |  | 0.086        | 0.383 |           |
| 2000  |          | 41.45                | 40.98 | 25.85 |  | 1.67                      | 7.68 | 143.96 |  | 0.536           | 0.298 | 0.222 |  | 0.108        | 0.514 |           |



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|      |       |       |       |      |      |        |       |       |       |       |       |
|------|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 41.27 | 41.12 | 24.57 | 1.26 | 6.55 | 105.34 | 0.355 | 0.254 | 0.167 | 0.078 | 0.220 |
| 250  | 41.24 | 40.94 | 26.82 | 1.23 | 5.94 | 111.65 | 0.376 | 0.231 | 0.166 | 0.100 | 0.329 |
| 500  | 41.13 | 40.81 | 26.63 | 1.27 | 6.13 | 115.79 | 0.407 | 0.239 | 0.173 | 0.058 | 0.334 |
| 1000 | 4444  | 4444  | 4444  | 4444 | 4444 | 4444   | 4444  | 4444  | 4444  | 4444  | 4444  |
| 2000 | 4444  | 4444  | 4444  | 4444 | 4444 | 4444   | 4444  | 4444  | 4444  | 4444  | 4444  |
| 0    | 39.24 | 38.90 | 21.68 | 1.46 | 7.47 | 100.12 | 0.492 | 0.306 | 0.184 | 0.106 | 0.230 |
| 250  | 39.13 | 38.73 | 23.33 | 1.50 | 6.85 | 105.40 | 0.508 | 0.292 | 0.180 | 0.107 | 0.253 |
| 500  | 39.01 | 38.61 | 23.23 | 1.52 | 7.01 | 108.15 | 0.516 | 0.289 | 0.185 | 0.087 | 0.242 |
| 1000 | 38.93 | 38.50 | 23.41 | 1.59 | 7.17 | 112.01 | 0.541 | 0.296 | 0.192 | 0.069 | 0.249 |
| 2000 | 38.87 | 38.39 | 23.33 | 1.66 | 7.31 | 116.71 | 0.566 | 0.304 | 0.199 | 0.070 | 0.258 |
| 0    | 42.55 | 42.23 | 23.93 | 1.33 | 7.38 | 104.91 | 0.430 | 0.278 | 0.174 | 0.150 | 1.280 |
| 250  | 42.35 | 41.94 | 25.74 | 1.48 | 6.98 | 109.53 | 0.464 | 0.285 | 0.167 | 0.119 | 0.686 |
| 500  | 42.19 | 41.76 | 25.52 | 1.54 | 7.28 | 112.44 | 0.483 | 0.278 | 0.175 | 0.074 | 0.649 |
| 1000 | 42.06 | 41.58 | 25.76 | 1.64 | 7.61 | 119.21 | 0.518 | 0.291 | 0.184 | 0.069 | 0.594 |
| 2000 | 41.94 | 41.41 | 25.49 | 1.73 | 7.90 | 122.31 | 0.548 | 0.304 | 0.191 | 0.078 | 0.626 |
| 0    | 42.32 | 42.06 | 25.85 | 1.19 | 6.29 | 109.23 | 0.374 | 0.238 | 0.168 | 0.144 | 1.318 |
| 250  | 42.23 | 41.94 | 28.69 | 1.18 | 5.58 | 116.42 | 0.372 | 0.212 | 0.161 | 0.129 | 1.010 |
| 500  | 42.15 | 41.85 | 28.51 | 1.19 | 5.70 | 119.14 | 0.374 | 0.217 | 0.166 | 0.090 | 1.078 |
| 1000 | 42.11 | 41.79 | 28.77 | 1.23 | 5.82 | 123.19 | 0.386 | 0.222 | 0.170 | 0.104 | 1.244 |
| 2000 | 42.08 | 41.74 | 28.73 | 1.26 | 5.92 | 125.15 | 0.398 | 0.226 | 0.173 | 0.250 | 1.788 |
| 0    | 41.24 | 40.91 | 22.78 | 1.42 | 7.55 | 102.10 | 0.458 | 0.294 | 0.178 | 0.104 | 0.220 |
| 250  | 41.12 | 40.73 | 24.64 | 1.44 | 6.87 | 105.68 | 0.466 | 0.269 | 0.171 | 0.092 | 0.201 |
| 500  | 41.00 | 40.61 | 24.44 | 1.47 | 7.03 | 107.28 | 0.474 | 0.276 | 0.175 | 0.054 | 0.183 |
| 1000 | 40.92 | 40.49 | 24.56 | 1.53 | 7.18 | 109.77 | 0.497 | 0.282 | 0.178 | 0.053 | 0.192 |
| 2000 | 40.85 | 40.38 | 24.52 | 1.60 | 7.28 | 110.96 | 0.519 | 0.287 | 0.180 | 0.054 | 0.220 |
| 0    | 41.77 | 41.52 | 24.64 | 1.19 | 6.50 | 103.59 | 0.377 | 0.249 | 0.167 | 0.106 | 0.250 |
| 250  | 41.67 | 41.39 | 27.38 | 1.16 | 5.69 | 108.81 | 0.369 | 0.219 | 0.158 | 0.084 | 0.217 |
| 500  | 41.58 | 41.30 | 27.24 | 1.17 | 5.82 | 111.18 | 0.373 | 0.224 | 0.162 | 0.053 | 0.212 |
| 1000 | 41.53 | 41.22 | 27.46 | 1.22 | 5.92 | 114.11 | 0.388 | 0.229 | 0.165 | 0.049 | 0.212 |
| 2000 | 41.50 | 41.16 | 27.46 | 1.25 | 5.97 | 115.46 | 0.401 | 0.232 | 0.167 | 0.047 | 0.204 |
| 0    | 40.39 | 40.10 | 22.31 | 1.35 | 7.53 | 98.86  | 0.445 | 0.299 | 0.176 | 0.098 | 0.250 |
| 250  | 40.18 | 39.81 | 23.75 | 1.43 | 7.00 | 100.60 | 0.471 | 0.280 | 0.169 | 0.120 | 0.437 |
| 500  | 40.02 | 39.62 | 23.34 | 1.50 | 7.38 | 102.26 | 0.496 | 0.296 | 0.174 | 0.101 | 0.572 |
| 1000 | 39.88 | 39.43 | 23.37 | 1.59 | 7.62 | 104.56 | 0.530 | 0.308 | 0.178 | 0.122 | 0.749 |
| 2000 | 39.74 | 39.21 | 22.42 | 1.77 | 8.49 | 103.89 | 0.591 | 0.345 | 0.184 | 0.153 | 1.212 |
| 0    | 41.21 | 40.80 | 22.48 | 1.50 | 8.04 | 114.97 | 0.484 | 0.313 | 0.203 | 0.093 | 0.420 |
| 250  | 41.14 | 40.77 | 24.73 | 1.47 | 7.04 | 118.68 | 0.474 | 0.275 | 0.191 | 0.094 | 0.297 |
| 500  | 41.04 | 40.68 | 24.61 | 1.47 | 7.19 | 121.87 | 0.474 | 0.281 | 0.197 | 0.060 | 0.289 |
| 1000 | 41.00 | 40.62 | 24.83 | 1.51 | 7.35 | 126.97 | 0.490 | 0.288 | 0.203 | 0.057 | 0.301 |
| 2000 | 40.98 | 40.57 | 24.72 | 1.56 | 7.58 | 131.10 | 0.506 | 0.297 | 0.211 | 0.056 | 0.328 |
| 0    | 40.86 | 40.53 | 21.65 | 1.49 | 8.27 | 107.63 | 0.483 | 0.325 | 0.198 | 0.085 | 0.200 |
| 250  | 40.64 | 40.20 | 22.88 | 1.62 | 8.15 | 110.33 | 0.530 | 0.323 | 0.192 | 0.082 | 0.184 |
| 500  | 40.51 | 40.05 | 22.69 | 1.67 | 8.42 | 112.03 | 0.546 | 0.335 | 0.196 | 0.051 | 0.174 |
| 1000 | 40.41 | 39.90 | 22.67 | 1.76 | 8.74 | 114.05 | 0.579 | 0.349 | 0.200 | 0.049 | 0.178 |
| 2000 | 40.31 | 39.76 | 22.48 | 1.85 | 8.97 | 114.52 | 0.608 | 0.359 | 0.203 | 0.048 | 0.194 |

|      |    |       |       |       |      |      |        |       |       |       |       |       |
|------|----|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 17 | 42.11 | 41.85 | 24.07 | 1.39 | 7.15 | 112.75 | 0.431 | 0.071 | 0.186 | 0.070 | 0.180 |
| 250  |    | 42.04 | 41.75 | 26.50 | 1.40 | 6.73 | 123.11 | 0.401 | 0.081 | 0.182 | 0.081 | 0.153 |
| 500  |    | 41.96 | 41.68 | 26.72 | 1.40 | 6.46 | 126.29 | 0.400 | 0.082 | 0.186 | 0.081 | 0.145 |
| 1000 |    | 41.88 | 41.60 | 27.10 | 1.41 | 6.28 | 134.57 | 0.413 | 0.085 | 0.198 | 0.048 | 0.154 |
| 2000 |    | 41.91 | 41.60 | 26.86 | 1.39 | 7.08 | 144.76 | 0.433 | 0.071 | 0.214 | 0.047 | 0.204 |
| 0    | 18 | 41.94 | 41.59 | 23.72 | 1.43 | 7.39 | 106.56 | 0.434 | 0.083 | 0.179 | 0.078 | 0.170 |
| 250  |    | 41.00 | 41.39 | 26.27 | 1.48 | 6.82 | 112.89 | 0.462 | 0.095 | 0.171 | 0.095 | 0.194 |
| 500  |    | 41.65 | 41.23 | 26.16 | 1.49 | 6.75 | 115.35 | 0.475 | 0.086 | 0.175 | 0.086 | 0.175 |
| 1000 |    | 41.56 | 41.11 | 26.50 | 1.50 | 6.91 | 120.49 | 0.499 | 0.067 | 0.181 | 0.053 | 0.175 |
| 2000 |    | 41.45 | 41.00 | 26.52 | 1.63 | 7.14 | 126.72 | 0.533 | 0.077 | 0.190 | 0.054 | 0.190 |
| 0    | 19 | 41.01 | 40.67 | 23.05 | 1.40 | 7.40 | 97.12  | 0.452 | 0.090 | 0.168 | 0.080 | 0.270 |
| 250  |    | 40.93 | 40.54 | 25.27 | 1.41 | 6.67 | 101.22 | 0.457 | 0.082 | 0.159 | 0.091 | 0.258 |
| 500  |    | 40.82 | 40.42 | 25.13 | 1.43 | 6.85 | 103.78 | 0.464 | 0.073 | 0.164 | 0.073 | 0.329 |
| 1000 |    | 40.77 | 40.34 | 25.32 | 1.48 | 7.00 | 106.91 | 0.483 | 0.076 | 0.168 | 0.184 | 1.322 |
| 2000 |    | 40.73 | 40.27 | 25.35 | 1.53 | 7.17 | 111.26 | 0.498 | 0.083 | 0.175 | 0.326 | 2.940 |
| 0    | 20 | 42.36 | 42.07 | 25.56 | 1.25 | 6.33 | 107.72 | 0.391 | 0.240 | 0.168 | 0.091 | 0.360 |
| 250  |    | 42.29 | 41.96 | 28.79 | 1.22 | 5.54 | 115.88 | 0.384 | 0.210 | 0.160 | 0.087 | 0.325 |
| 500  |    | 42.18 | 41.86 | 28.87 | 1.23 | 5.68 | 120.95 | 0.387 | 0.216 | 0.167 | 0.086 | 0.317 |
| 1000 |    | 42.13 | 41.79 | 29.17 | 1.28 | 5.83 | 126.51 | 0.404 | 0.222 | 0.173 | 0.054 | 0.344 |
| 2000 |    | 42.08 | 41.71 | 29.16 | 1.34 | 5.98 | 130.61 | 0.421 | 0.228 | 0.178 | 0.051 | 0.376 |
| 0    | 21 | 39.96 | 39.62 | 22.19 | 1.46 | 7.47 | 101.73 | 0.483 | 0.300 | 0.182 | 0.109 | 0.970 |
| 250  |    | 39.81 | 39.42 | 24.01 | 1.51 | 6.81 | 111.09 | 0.503 | 0.275 | 0.184 | 0.181 | 0.594 |
| 500  |    | 39.65 | 39.25 | 23.68 | 1.54 | 7.02 | 114.75 | 0.515 | 0.285 | 0.193 | 0.069 | 0.609 |
| 1000 |    | 39.55 | 39.12 | 23.76 | 1.62 | 7.26 | 120.97 | 0.543 | 0.295 | 0.203 | 1.098 | 1.377 |
| 2000 |    | 39.47 | 39.01 | 23.52 | 1.68 | 7.46 | 124.48 | 0.565 | 0.304 | 0.211 | 0.210 | 2.760 |
| 0    | 22 | 40.16 | 39.77 | 21.43 | 1.58 | 8.14 | 98.22  | 0.531 | 0.326 | 0.182 | 0.094 | 0.510 |
| 250  |    | 40.01 | 39.56 | 23.03 | 1.63 | 7.43 | 100.60 | 0.541 | 0.299 | 0.174 | 0.101 | 0.457 |
| 500  |    | 39.85 | 39.39 | 22.89 | 1.65 | 7.59 | 102.40 | 0.550 | 0.307 | 0.178 | 0.066 | 0.445 |
| 1000 |    | 39.73 | 39.23 | 23.00 | 1.73 | 7.76 | 104.76 | 0.579 | 0.315 | 0.181 | 0.064 | 0.494 |
| 2000 |    | 39.63 | 39.08 | 22.94 | 1.80 | 7.90 | 106.26 | 0.603 | 0.322 | 0.184 | 0.074 | 0.648 |
| 0    | 23 | 41.55 | 41.24 | 25.22 | 1.31 | 6.46 | 109.33 | 0.418 | 0.249 | 0.172 | 0.141 | 0.690 |
| 250  |    | 41.45 | 41.10 | 27.47 | 1.35 | 6.01 | 119.52 | 0.431 | 0.233 | 0.173 | 0.094 | 0.447 |
| 500  |    | 41.33 | 40.98 | 27.10 | 1.36 | 6.23 | 123.57 | 0.437 | 0.242 | 0.181 | 0.063 | 0.440 |
| 1000 |    | 41.27 | 40.88 | 26.94 | 1.45 | 6.55 | 130.46 | 0.466 | 0.255 | 0.193 | 0.059 | 0.440 |
| 2000 |    | 41.21 | 40.79 | 26.66 | 1.52 | 6.77 | 133.74 | 0.488 | 0.264 | 0.200 | 0.055 | 0.450 |
| 0    | 24 | 41.42 | 40.99 | 22.50 | 1.60 | 8.26 | 102.93 | 0.513 | 0.321 | 0.181 | 0.092 | 0.470 |
| 250  |    | 41.20 | 40.70 | 24.55 | 1.67 | 7.61 | 109.98 | 0.536 | 0.297 | 0.178 | 0.091 | 0.363 |
| 500  |    | 41.14 | 40.63 | 24.38 | 1.69 | 7.82 | 113.94 | 0.545 | 0.306 | 0.186 | 0.059 | 0.337 |
| 1000 |    | 41.03 | 40.47 | 24.49 | 1.79 | 8.06 | 120.18 | 0.579 | 0.317 | 0.195 | 0.055 | 0.333 |
| 2000 |    | 40.90 | 40.29 | 24.45 | 1.89 | 8.20 | 122.58 | 0.614 | 0.324 | 0.199 | 0.053 | 0.346 |
| 0    | 25 | 44.04 | 44.51 | 28.33 | 1.26 | 5.95 | 105.05 | 0.373 | 0.213 | 0.148 | 0.061 | 0.610 |
| 250  |    | 44.81 | 44.44 | 31.83 | 1.25 | 5.20 | 112.57 | 0.369 | 0.186 | 0.141 | 0.079 | 0.563 |
| 500  |    | 44.71 | 44.34 | 31.83 | 1.24 | 5.27 | 115.52 | 0.368 | 0.189 | 0.144 | 0.078 | 0.424 |
| 1000 |    | 44.65 | 44.26 | 32.27 | 1.28 | 5.39 | 120.59 | 0.381 | 0.194 | 0.149 | 0.072 | 0.432 |
| 2000 |    | 44.64 | 44.22 | 32.02 | 1.33 | 5.48 | 121.31 | 0.394 | 0.197 | 0.151 | 0.082 | 0.468 |

|    |      |       |       |       |      |      |        |       |       |       |       |        |
|----|------|-------|-------|-------|------|------|--------|-------|-------|-------|-------|--------|
| 16 | 0    | 43.60 | 43.32 | 27.91 | 1.21 | 5.97 | 106.19 | 0.379 | 0.216 | 0.151 | 0.057 | 0.230  |
|    | 250  | 43.52 | 43.14 | 31.11 | 1.25 | 5.92 | 112.12 | 0.385 | 0.194 | 0.143 | 0.065 | 0.370  |
|    | 500  | 43.40 | 43.01 | 31.00 | 1.27 | 5.83 | 114.32 | 0.389 | 0.197 | 0.147 | 0.064 | 0.208  |
|    | 1000 | 43.27 | 42.83 | 31.70 | 1.37 | 5.44 | 119.84 | 0.419 | 0.202 | 0.150 | 0.076 | 0.355  |
|    | 2000 | 43.14 | 42.70 | 31.41 | 1.41 | 5.14 | 121.14 | 0.431 | 0.211 | 0.151 | 0.077 | 0.311  |
| 17 | 0    | 44.77 | 44.45 | 27.76 | 1.26 | 6.36 | 113.41 | 0.379 | 0.228 | 0.163 | 0.063 | 0.550  |
|    | 250  | 44.71 | 44.36 | 31.40 | 1.24 | 6.43 | 118.23 | 0.368 | 0.195 | 0.150 | 0.073 | 0.561  |
|    | 500  | 44.61 | 44.27 | 31.53 | 1.23 | 6.47 | 121.26 | 0.365 | 0.197 | 0.153 | 0.071 | 0.488  |
|    | 1000 | 44.56 | 44.19 | 31.60 | 1.26 | 6.57 | 124.55 | 0.375 | 0.201 | 0.156 | 0.069 | 0.419  |
|    | 2000 | 44.55 | 44.16 | 31.80 | 1.30 | 6.65 | 126.45 | 0.386 | 0.204 | 0.158 | 0.071 | 0.460  |
| 18 | 0    | 43.84 | 43.52 | 27.12 | 1.26 | 6.14 | 103.93 | 0.383 | 0.235 | 0.152 | 0.061 | 0.360  |
|    | 250  | 43.71 | 43.30 | 29.42 | 1.32 | 5.66 | 105.65 | 0.402 | 0.208 | 0.143 | 0.071 | 0.442  |
|    | 500  | 43.59 | 43.17 | 29.14 | 1.35 | 5.83 | 107.26 | 0.410 | 0.215 | 0.146 | 0.068 | 0.273  |
|    | 1000 | 43.50 | 43.05 | 29.09 | 1.43 | 6.05 | 109.67 | 0.436 | 0.224 | 0.150 | 0.068 | 0.281  |
|    | 2000 | 43.46 | 42.95 | 28.75 | 1.50 | 6.23 | 110.15 | 0.459 | 0.231 | 0.152 | 0.071 | 0.294  |
| 19 | 0    | 44.14 | 43.85 | 28.12 | 1.16 | 5.71 | 103.04 | 0.350 | 0.207 | 0.146 | 0.056 | 0.260  |
|    | 250  | 44.02 | 43.67 | 31.14 | 1.20 | 5.18 | 111.97 | 0.362 | 0.189 | 0.143 | 0.064 | 0.359  |
|    | 500  | 43.90 | 43.55 | 30.93 | 1.22 | 5.32 | 115.22 | 0.368 | 0.195 | 0.148 | 0.062 | 0.219  |
|    | 1000 | 43.81 | 43.42 | 31.17 | 1.29 | 5.50 | 120.20 | 0.392 | 0.202 | 0.153 | 0.063 | 0.235  |
|    | 2000 | 43.73 | 43.29 | 30.90 | 1.37 | 5.64 | 121.87 | 0.414 | 0.207 | 0.157 | 0.064 | 0.226  |
| 20 | 0    | 44.28 | 43.96 | 27.39 | 1.26 | 6.21 | 107.24 | 0.378 | 0.225 | 0.156 | 0.131 | 2.760  |
|    | 250  | 44.24 | 43.89 | 30.98 | 1.22 | 5.29 | 112.15 | 0.366 | 0.192 | 0.144 | 0.172 | 3.950  |
|    | 500  | 44.14 | 43.79 | 30.96 | 1.22 | 5.36 | 114.82 | 0.366 | 0.195 | 0.148 | 0.177 | 4.420  |
|    | 1000 | 44.09 | 43.72 | 31.23 | 1.26 | 5.46 | 118.41 | 0.378 | 0.199 | 0.151 | 0.189 | 5.560  |
|    | 2000 | 44.07 | 43.67 | 31.10 | 1.29 | 5.55 | 120.07 | 0.389 | 0.202 | 0.154 | 0.222 | 7.000  |
| 21 | 0    | 43.15 | 42.80 | 26.29 | 1.35 | 6.40 | 107.83 | 0.415 | 0.238 | 0.163 | 0.510 | 16.860 |
|    | 250  | 43.00 | 42.56 | 28.53 | 1.42 | 5.89 | 108.85 | 0.438 | 0.220 | 0.152 | 0.438 | 13.860 |
|    | 500  | 42.86 | 42.41 | 28.42 | 1.46 | 6.04 | 110.91 | 0.451 | 0.227 | 0.155 | 0.470 | 15.850 |
|    | 1000 | 42.76 | 42.27 | 28.46 | 1.54 | 6.21 | 112.85 | 0.477 | 0.234 | 0.158 | 0.517 | 19.440 |
|    | 2000 | 42.67 | 42.13 | 28.20 | 1.62 | 6.37 | 113.39 | 0.503 | 0.241 | 0.160 | 0.586 | 23.200 |
| 22 | 0    | 42.85 | 42.52 | 26.15 | 1.36 | 6.72 | 115.32 | 0.420 | 0.252 | 0.175 | 0.069 | 0.500  |
|    | 250  | 42.73 | 42.34 | 29.18 | 1.39 | 6.07 | 125.89 | 0.430 | 0.228 | 0.172 | 0.067 | 0.484  |
|    | 500  | 42.60 | 42.19 | 29.08 | 1.41 | 6.24 | 130.49 | 0.439 | 0.235 | 0.179 | 0.062 | 0.350  |
|    | 1000 | 42.49 | 42.03 | 29.35 | 1.51 | 6.47 | 137.08 | 0.473 | 0.245 | 0.186 | 0.061 | 0.377  |
|    | 2000 | 42.36 | 41.85 | 29.16 | 1.63 | 6.70 | 140.78 | 0.510 | 0.255 | 0.192 | 0.067 | 0.366  |
| 23 | 0    | 44.30 | 43.99 | 28.17 | 1.25 | 6.04 | 109.07 | 0.374 | 0.219 | 0.154 | 0.054 | 0.240  |
|    | 250  | 44.24 | 43.90 | 31.68 | 1.21 | 5.17 | 114.91 | 0.362 | 0.187 | 0.144 | 0.060 | 0.269  |
|    | 500  | 44.15 | 43.81 | 31.75 | 1.19 | 5.23 | 118.40 | 0.358 | 0.190 | 0.148 | 0.058 | 0.178  |
|    | 1000 | 44.10 | 43.76 | 32.26 | 1.22 | 5.31 | 123.37 | 0.367 | 0.193 | 0.152 | 0.057 | 0.186  |
|    | 2000 | 44.08 | 43.71 | 32.28 | 1.25 | 5.42 | 126.48 | 0.377 | 0.197 | 0.156 | 0.060 | 0.192  |
| 24 | 0    | 45.50 | 45.20 | 28.95 | 1.16 | 5.58 | 98.94  | 0.338 | 0.197 | 0.136 | 0.089 | 0.650  |
|    | 250  | 45.44 | 45.12 | 32.67 | 1.11 | 4.79 | 104.97 | 0.325 | 0.169 | 0.128 | 0.069 | 0.496  |
|    | 500  | 45.35 | 45.04 | 32.52 | 1.09 | 4.86 | 107.20 | 0.320 | 0.172 | 0.131 | 0.068 | 0.435  |
|    | 1000 | 45.32 | 45.00 | 33.00 | 1.12 | 4.96 | 111.36 | 0.329 | 0.175 | 0.134 | 0.066 | 0.497  |
|    | 2000 | 45.30 | 44.96 | 33.05 | 1.14 | 5.04 | 113.64 | 0.335 | 0.178 | 0.137 | 0.070 | 0.544  |

|    |      |       |       |       |      |      |        |       |       |       |        |
|----|------|-------|-------|-------|------|------|--------|-------|-------|-------|--------|
| 35 | 0    | 43.60 | 43.00 | 25.17 | 1.45 | 7.3  | 110.87 | 0.432 | 0.175 | 0.131 | 0.910  |
|    | 250  | 43.17 | 42.73 | 27.06 | 1.5  | 6.84 | 112.09 | 0.470 | 0.165 | 0.106 | 1.928  |
|    | 500  | 43.05 | 42.57 | 26.76 | 1.57 | 7.06 | 114.13 | 0.485 | 0.170 | 0.105 | 1.862  |
|    | 1000 | 42.95 | 42.41 | 26.81 | 1.67 | 7.29 | 116.94 | 0.517 | 0.174 | 0.103 | 2.088  |
|    | 2000 | 42.85 | 42.24 | 26.47 | 1.79 | 7.54 | 117.93 | 0.554 | 0.177 | 0.126 | 2.300  |
| 36 | 0    | 42.85 | 42.56 | 27.17 | 1.20 | 5.85 | 104.17 | 0.373 | 0.153 | 0.076 | 0.700  |
|    | 250  | 42.81 | 42.48 | 30.42 | 1.16 | 4.96 | 104.71 | 0.360 | 0.137 | 0.070 | 0.598  |
|    | 500  | 42.71 | 42.39 | 30.16 | 1.14 | 5.00 | 105.17 | 0.355 | 0.139 | 0.057 | 0.522  |
|    | 1000 | 42.68 | 42.34 | 30.62 | 1.17 | 5.05 | 108.21 | 0.365 | 0.141 | 0.066 | 0.566  |
|    | 2000 | 42.65 | 42.30 | 30.44 | 1.20 | 5.12 | 108.82 | 0.373 | 0.142 | 0.070 | 0.614  |
| 37 | 0    | 42.90 | 42.61 | 27.12 | 1.23 | 6.07 | 109.42 | 0.390 | 0.161 | 0.055 | 0.300  |
|    | 250  | 42.79 | 42.45 | 30.82 | 1.22 | 5.25 | 115.71 | 0.378 | 0.151 | 0.059 | 0.310  |
|    | 500  | 42.69 | 42.35 | 30.62 | 1.22 | 5.33 | 118.85 | 0.378 | 0.154 | 0.057 | 0.334  |
|    | 1000 | 42.64 | 42.27 | 31.07 | 1.26 | 5.43 | 123.08 | 0.393 | 0.158 | 0.057 | 0.352  |
|    | 2000 | 42.61 | 42.21 | 30.93 | 1.30 | 5.52 | 124.69 | 0.406 | 0.160 | 0.059 | 0.370  |
| 38 | 0    | 42.78 | 42.51 | 25.38 | 1.21 | 6.47 | 99.57  | 0.376 | 0.156 | 0.053 | 0.100  |
|    | 250  | 42.65 | 42.32 | 28.13 | 1.20 | 5.59 | 99.00  | 0.372 | 0.148 | 0.052 | 0.205  |
|    | 500  | 42.55 | 42.20 | 27.84 | 1.22 | 5.69 | 98.95  | 0.379 | 0.141 | 0.054 | 0.146  |
|    | 1000 | 42.43 | 42.10 | 28.07 | 1.28 | 5.80 | 100.53 | 0.397 | 0.143 | 0.058 | 0.184  |
|    | 2000 | 42.40 | 41.98 | 27.85 | 1.34 | 5.92 | 100.67 | 0.420 | 0.144 | 0.115 | 0.510  |
| 39 | 0    | 43.80 | 43.49 | 26.70 | 1.25 | 6.27 | 102.96 | 0.380 | 0.153 | 0.215 | 5.560  |
|    | 250  | 43.67 | 43.30 | 29.69 | 1.26 | 5.46 | 104.48 | 0.382 | 0.140 | 0.199 | 5.780  |
|    | 500  | 43.55 | 43.18 | 29.40 | 1.27 | 5.57 | 105.37 | 0.388 | 0.143 | 0.224 | 6.720  |
|    | 1000 | 43.49 | 43.08 | 29.65 | 1.34 | 5.69 | 107.64 | 0.408 | 0.144 | 0.257 | 9.240  |
|    | 2000 | 43.42 | 42.97 | 29.39 | 1.40 | 5.81 | 107.97 | 0.427 | 0.146 | 0.312 | 11.660 |
| 40 | 0    | 43.27 | 42.96 | 27.81 | 1.23 | 5.89 | 108.35 | 0.378 | 0.155 | 0.049 | 0.180  |
|    | 250  | 43.20 | 42.86 | 31.63 | 1.19 | 4.98 | 114.10 | 0.365 | 0.144 | 0.055 | 0.213  |
|    | 500  | 43.09 | 42.76 | 31.52 | 1.17 | 5.05 | 116.39 | 0.361 | 0.147 | 0.052 | 0.146  |
|    | 1000 | 43.06 | 42.71 | 31.92 | 1.21 | 5.12 | 120.01 | 0.372 | 0.150 | 0.053 | 0.152  |
|    | 2000 | 43.04 | 42.67 | 31.81 | 1.23 | 5.21 | 121.99 | 0.380 | 0.153 | 0.053 | 0.158  |
| 41 | 0    | 43.24 | 42.93 | 26.28 | 1.26 | 6.31 | 100.83 | 0.397 | 0.153 | 0.061 | 0.240  |
|    | 250  | 43.11 | 42.74 | 29.14 | 1.27 | 5.53 | 102.40 | 0.392 | 0.140 | 0.058 | 0.229  |
|    | 500  | 42.98 | 42.61 | 28.88 | 1.28 | 5.66 | 103.30 | 0.396 | 0.142 | 0.052 | 0.159  |
|    | 1000 | 42.91 | 42.49 | 29.10 | 1.36 | 5.81 | 105.72 | 0.420 | 0.145 | 0.052 | 0.172  |
|    | 2000 | 42.82 | 42.35 | 28.90 | 1.44 | 5.95 | 106.36 | 0.445 | 0.146 | 0.055 | 0.164  |
| 42 | 0    | 43.44 | 43.12 | 27.08 | 1.28 | 6.27 | 110.15 | 0.392 | 0.162 | 0.061 | 0.260  |
|    | 250  | 43.25 | 42.85 | 29.78 | 1.37 | 5.79 | 120.49 | 0.412 | 0.161 | 0.059 | 0.294  |
|    | 500  | 43.08 | 42.66 | 29.36 | 1.41 | 5.98 | 123.46 | 0.434 | 0.167 | 0.053 | 0.205  |
|    | 1000 | 42.91 | 42.42 | 29.54 | 1.54 | 6.21 | 128.70 | 0.478 | 0.173 | 0.054 | 0.228  |
|    | 2000 | 42.84 | 42.35 | 29.44 | 1.64 | 6.44 | 130.82 | 0.504 | 0.174 | 0.054 | 0.234  |
| 43 | 0    | 45.29 | 44.98 | 28.02 | 1.20 | 5.91 | 106.92 | 0.353 | 0.148 | 0.267 | 4.530  |
|    | 250  | 45.21 | 44.87 | 32.53 | 1.17 | 5.10 | 113.84 | 0.345 | 0.139 | 0.192 | 3.360  |
|    | 500  | 45.11 | 44.77 | 32.51 | 1.18 | 5.19 | 117.29 | 0.346 | 0.144 | 0.187 | 3.330  |
|    | 1000 | 45.06 | 44.69 | 33.04 | 1.23 | 5.30 | 122.11 | 0.362 | 0.147 | 0.185 | 4.090  |
|    | 2000 | 44.99 | 44.58 | 32.69 | 1.28 | 5.43 | 123.82 | 0.377 | 0.151 | 0.200 | 4.880  |

|      |    |       |       |       |      |      |        |       |       |       |       |       |
|------|----|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 44 | 43.25 | 42.95 | 27.22 | 1.35 | 5.80 | 98.27  | 0.330 | 0.215 | 0.134 | 0.064 | 0.200 |
| 250  |    | 43.08 | 42.68 | 29.52 | 1.30 | 5.39 | 98.85  | 0.401 | 0.193 | 0.133 | 0.065 | 0.470 |
| 500  |    | 42.94 | 42.52 | 29.07 | 1.33 | 5.46 | 99.23  | 0.410 | 0.204 | 0.136 | 0.062 | 0.400 |
| 1000 |    | 42.86 | 42.39 | 29.22 | 1.42 | 5.62 | 101.30 | 0.439 | 0.211 | 0.138 | 0.061 | 0.427 |
| 2000 |    | 42.75 | 42.24 | 28.81 | 1.49 | 5.81 | 102.12 | 0.452 | 0.219 | 0.141 | 0.060 | 0.412 |
| 0    | 45 | 44.53 | 44.20 | 27.07 | 1.22 | 6.18 | 99.67  | 0.377 | 0.222 | 0.147 | 0.064 | 0.744 |
| 250  |    | 44.42 | 44.02 | 29.90 | 1.20 | 5.39 | 99.67  | 0.380 | 0.195 | 0.133 | 0.065 | 0.511 |
| 500  |    | 44.28 | 43.87 | 29.63 | 1.31 | 5.50 | 100.10 | 0.391 | 0.204 | 0.135 | 0.062 | 0.409 |
| 1000 |    | 44.21 | 43.76 | 29.78 | 1.37 | 5.60 | 101.32 | 0.411 | 0.204 | 0.135 | 0.057 | 0.414 |
| 2000 |    | 44.13 | 43.65 | 29.37 | 1.42 | 5.75 | 101.56 | 0.427 | 0.210 | 0.138 | 0.054 | 0.406 |
| 0    | 46 | 43.14 | 42.81 | 25.34 | 1.35 | 6.94 | 100.44 | 0.415 | 0.258 | 0.158 | 0.066 | 0.430 |
| 250  |    | 43.08 | 42.72 | 27.97 | 1.29 | 5.98 | 99.07  | 0.398 | 0.223 | 0.141 | 0.056 | 0.312 |
| 500  |    | 42.98 | 42.63 | 27.76 | 1.29 | 6.12 | 99.85  | 0.398 | 0.228 | 0.143 | 0.054 | 0.259 |
| 1000 |    | 42.95 | 42.57 | 27.89 | 1.33 | 6.24 | 101.06 | 0.411 | 0.233 | 0.144 | 0.052 | 0.265 |
| 2000 |    | 42.90 | 42.50 | 27.58 | 1.37 | 6.40 | 101.55 | 0.422 | 0.240 | 0.147 | 0.052 | 0.296 |
| 0    | 47 | 42.50 | 42.21 | 25.17 | 1.27 | 6.77 | 105.00 | 0.395 | 0.255 | 0.166 | 0.240 | 7.270 |
| 250  |    | 42.38 | 42.03 | 27.29 | 1.30 | 6.18 | 105.50 | 0.406 | 0.234 | 0.154 | 0.193 | 5.970 |
| 500  |    | 42.27 | 41.89 | 26.85 | 1.34 | 6.37 | 106.45 | 0.420 | 0.242 | 0.158 | 0.205 | 6.170 |
| 1000 |    | 42.19 | 41.78 | 26.91 | 1.42 | 6.56 | 108.41 | 0.440 | 0.250 | 0.160 | 0.504 | 8.360 |
| 2000 |    | 42.10 | 41.64 | 26.43 | 1.49 | 6.75 | 108.57 | 0.470 | 0.258 | 0.163 | 0.314 | 9.040 |
| 0    | 48 | 43.23 | 42.88 | 26.03 | 1.34 | 6.41 | 102.31 | 0.413 | 0.238 | 0.156 | 0.054 | 0.210 |
| 250  |    | 43.10 | 42.68 | 28.80 | 1.36 | 5.57 | 102.02 | 0.419 | 0.208 | 0.141 | 0.058 | 0.236 |
| 500  |    | 42.96 | 42.54 | 28.76 | 1.36 | 5.64 | 102.90 | 0.420 | 0.211 | 0.142 | 0.053 | 0.171 |
| 1000 |    | 42.90 | 42.43 | 29.01 | 1.42 | 5.72 | 104.37 | 0.440 | 0.215 | 0.143 | 0.051 | 0.186 |
| 2000 |    | 42.81 | 42.31 | 28.76 | 1.48 | 5.83 | 104.57 | 0.458 | 0.220 | 0.145 | 0.052 | 0.178 |

\*\*\* SPRAGUE ELECTRIC SURGE CURRENT TEST PROGRAM \*\*\*

CONTROL UNITS

11/14/79

11H TEST -- 125C.00BLIS

| HOURS | UNIT NO. | CAPACITANCE (uf) |       |       | DISSIPATION FACTOR (Z) |      |        | ESR (OHMS) |       |       | DCL (uA) |       | FUSE FLOW |
|-------|----------|------------------|-------|-------|------------------------|------|--------|------------|-------|-------|----------|-------|-----------|
|       |          | 120Hz            | 1KHz  | 40KHz | 120Hz                  | 1KHz | 40KHz  | 120Hz      | 1KHz  | 40KHz | 25C      | 85C   |           |
| 0     | 1        | 41.80            | 41.52 | 25.38 | 1.21                   | 6.21 | 104.32 | 0.384      | 0.238 | 0.164 | 0.114    | 0.340 |           |
| 250   |          | 41.73            | 41.42 | 28.02 | 1.18                   | 5.48 | 108.68 | 0.374      | 0.210 | 0.154 | 0.084    | 0.367 |           |
| 500   |          | 41.62            | 41.32 | 28.19 | 1.17                   | 5.54 | 112.64 | 0.374      | 0.213 | 0.158 | 0.249    | 0.429 |           |
| 1000  |          | 41.60            | 41.27 | 28.64 | 1.21                   | 5.61 | 115.48 | 0.387      | 0.216 | 0.160 | 6.573    | 0.930 |           |
| 2000  |          | 41.53            | 41.19 | 28.55 | 1.27                   | 5.82 | 119.66 | 0.404      | 0.225 | 0.167 | 0.674    | 2.000 |           |
| 0     | 2        | 39.65            | 39.27 | 20.98 | 1.61                   | 8.30 | 106.32 | 0.538      | 0.336 | 0.202 | 0.115    | 0.650 |           |
| 250   |          | 39.52            | 39.07 | 22.70 | 1.64                   | 7.59 | 110.24 | 0.549      | 0.309 | 0.193 | 0.094    | 0.529 |           |
| 500   |          | 39.38            | 38.93 | 22.69 | 1.65                   | 7.74 | 113.48 | 0.555      | 0.316 | 0.199 | 0.304    | 0.424 |           |
| 1000  |          | 39.34            | 38.86 | 22.99 | 1.71                   | 7.89 | 118.01 | 0.576      | 0.323 | 0.204 | 0.704    | 0.811 |           |
| 2000  |          | 39.26            | 38.76 | 22.81 | 1.77                   | 8.12 | 120.39 | 0.598      | 0.334 | 0.210 | 0.844    | 1.240 |           |
| 0     | 3        | 40.59            | 40.32 | 22.61 | 1.37                   | 7.83 | 122.06 | 0.447      | 0.309 | 0.215 | 0.087    | 0.460 |           |
| 250   |          | 40.49            | 40.20 | 24.32 | 1.38                   | 7.37 | 133.42 | 0.452      | 0.292 | 0.218 | 0.120    | 0.470 |           |
| 500   |          | 40.39            | 40.09 | 24.11 | 1.43                   | 7.77 | 141.24 | 0.468      | 0.308 | 0.233 | 0.319    | 0.810 |           |
| 1000  |          | 40.34            | 40.00 | 23.45 | 1.58                   | 8.69 | 150.94 | 0.520      | 0.346 | 0.256 | 0.430    | 3.320 |           |
| 2000  |          | 40.25            | 39.86 | 22.35 | 1.77                   | 9.91 | 160.60 | 0.584      | 0.396 | 0.286 | 0.482    | 4.200 |           |
| 0     | 4        | 42.46            | 42.20 | 24.58 | 1.25                   | 6.99 | 111.36 | 0.392      | 0.264 | 0.180 | 0.080    | 0.296 |           |
| 250   |          | 42.32            | 42.01 | 26.47 | 1.29                   | 6.52 | 120.72 | 0.404      | 0.247 | 0.181 | 0.082    | 0.365 |           |
| 500   |          | 42.16            | 41.84 | 26.37 | 1.34                   | 6.81 | 127.30 | 0.423      | 0.259 | 0.192 | 0.241    | 0.556 |           |
| 1000  |          | 42.01            | 41.62 | 26.36 | 1.49                   | 7.20 | 134.24 | 0.469      | 0.276 | 0.203 | 0.377    | 1.716 |           |
| 2000  |          | 41.74            | 41.27 | 25.79 | 1.68                   | 7.83 | 143.32 | 0.533      | 0.302 | 0.221 | 0.384    | 2.500 |           |
| 0     | 5        | 40.31            | 40.03 | 22.45 | 1.35                   | 7.53 | 101.01 | 0.443      | 0.299 | 0.179 | 0.113    | 0.323 |           |
| 250   |          | 40.24            | 39.93 | 24.17 | 1.32                   | 6.89 | 105.13 | 0.434      | 0.275 | 0.173 | 0.071    | 0.317 |           |
| 500   |          | 40.14            | 39.83 | 24.24 | 1.33                   | 7.06 | 108.41 | 0.432      | 0.282 | 0.178 | 0.183    | 0.317 |           |
| 1000  |          | 40.11            | 39.78 | 24.57 | 1.38                   | 7.24 | 113.93 | 0.456      | 0.290 | 0.184 | 0.391    | 0.803 |           |
| 2000  |          | 40.05            | 39.69 | 24.53 | 1.45                   | 7.61 | 122.28 | 0.480      | 0.305 | 0.198 | 0.460    | 1.366 |           |
| 0     | 6        | 40.07            | 39.78 | 21.79 | 1.40                   | 7.80 | 100.11 | 0.464      | 0.312 | 0.183 | 0.085    | 0.269 |           |
| 250   |          | 39.96            | 39.61 | 23.27 | 1.40                   | 7.08 | 100.54 | 0.466      | 0.284 | 0.172 | 0.071    | 0.310 |           |
| 500   |          | 39.84            | 39.48 | 23.36 | 1.43                   | 7.21 | 102.87 | 0.475      | 0.291 | 0.175 | 0.141    | 0.263 |           |
| 1000  |          | 39.77            | 39.37 | 23.58 | 1.49                   | 7.28 | 104.42 | 0.498      | 0.295 | 0.176 | 0.258    | 0.590 |           |
| 2000  |          | 39.65            | 39.22 | 23.49 | 1.57                   | 7.51 | 107.04 | 0.526      | 0.305 | 0.181 | 0.134    | 0.180 |           |
| 0     | 7        | 42.36            | 42.13 | 25.87 | 1.13                   | 6.19 | 108.48 | 0.355      | 0.234 | 0.167 | 0.133    | 1.128 |           |
| 250   |          | 42.29            | 42.05 | 28.52 | 1.08                   | 5.44 | 113.06 | 0.339      | 0.206 | 0.158 | 0.078    | 0.693 |           |
| 500   |          | 42.21            | 41.98 | 28.88 | 1.07                   | 5.49 | 117.41 | 0.336      | 0.208 | 0.162 | 0.185    | 0.732 |           |
| 1000  |          | 42.12            | 41.94 | 29.34 | 1.09                   | 5.53 | 120.49 | 0.344      | 0.210 | 0.163 | 0.371    | 1.325 |           |
| 2000  |          | 42.15            | 41.89 | 29.31 | 1.13                   | 5.70 | 124.36 | 0.354      | 0.217 | 0.169 | 0.434    | 2.140 |           |

|      |       |       |       |      |      |        |       |       |       |       |        |
|------|-------|-------|-------|------|------|--------|-------|-------|-------|-------|--------|
| 0    | 44.44 | 44.60 | 28.71 | 1.30 | 5.87 | 100.00 | 0.377 | 0.210 | 0.147 | 0.109 | 1.369  |
| 250  | 44.84 | 44.46 | 31.57 | 1.30 | 5.87 | 113.35 | 0.379 | 0.189 | 0.143 | 0.107 | 0.846  |
| 500  | 44.85 | 44.25 | 31.69 | 1.32 | 5.49 | 121.63 | 0.392 | 0.198 | 0.152 | 0.386 | 0.722  |
| 1000 | 44.34 | 43.83 | 31.81 | 1.53 | 5.95 | 131.42 | 0.458 | 0.216 | 0.164 | 0.538 | 1.041  |
| 2000 | 43.82 | 43.24 | 30.23 | 1.76 | 6.81 | 143.19 | 0.533 | 0.251 | 0.188 | 0.662 | 1.180  |
| 0    | 42.80 | 42.46 | 25.62 | 1.39 | 6.76 | 114.32 | 0.431 | 0.253 | 0.178 | 0.116 | 1.199  |
| 250  | 42.55 | 42.11 | 27.84 | 1.49 | 6.27 | 121.72 | 0.466 | 0.237 | 0.174 | 0.155 | 2.080  |
| 500  | 42.21 | 41.73 | 27.70 | 1.59 | 6.58 | 128.74 | 0.501 | 0.251 | 0.185 | 1.550 | 4.240  |
| 1000 | 41.78 | 41.21 | 26.26 | 1.84 | 7.43 | 134.43 | 0.586 | 0.287 | 0.204 | 0.719 | 6.859  |
| 2000 | 41.29 | 40.64 | 24.46 | 2.10 | 8.66 | 141.00 | 0.674 | 0.339 | 0.229 | 4.860 | 10.760 |
| 0    | 41.31 | 40.98 | 23.05 | 1.42 | 7.38 | 105.37 | 0.456 | 0.287 | 0.182 | 0.130 | 1.856  |
| 250  | 41.27 | 40.92 | 25.20 | 1.38 | 6.51 | 108.11 | 0.442 | 0.253 | 0.171 | 0.117 | 1.374  |
| 500  | 41.14 | 40.77 | 25.50 | 1.39 | 6.62 | 112.09 | 0.449 | 0.258 | 0.175 | 0.359 | 1.281  |
| 1000 | 41.06 | 40.66 | 25.90 | 1.46 | 6.81 | 117.32 | 0.473 | 0.267 | 0.180 | 0.599 | 1.722  |
| 2000 | 40.96 | 40.53 | 25.50 | 1.56 | 7.30 | 121.72 | 0.504 | 0.287 | 0.190 | 0.634 | 2.180  |
| 0    | 41.74 | 41.48 | 25.50 | 1.20 | 6.24 | 105.17 | 0.380 | 0.239 | 0.164 | 0.087 | 0.298  |
| 250  | 41.68 | 41.40 | 27.72 | 1.17 | 5.63 | 110.82 | 0.371 | 0.216 | 0.159 | 0.066 | 0.281  |
| 500  | 41.58 | 41.30 | 27.98 | 1.18 | 5.80 | 117.90 | 0.376 | 0.223 | 0.168 | 0.203 | 0.324  |
| 1000 | 41.54 | 41.24 | 28.33 | 1.24 | 6.03 | 126.22 | 0.396 | 0.233 | 0.177 | 0.406 | 0.988  |
| 2000 | 41.47 | 41.15 | 28.21 | 1.31 | 6.40 | 135.67 | 0.419 | 0.248 | 0.191 | 0.438 | 1.760  |
| 0    | 42.02 | 41.76 | 23.99 | 1.29 | 7.14 | 113.64 | 0.408 | 0.272 | 0.189 | 0.095 | 0.395  |
| 250  | 41.92 | 41.62 | 26.03 | 1.29 | 6.58 | 121.58 | 0.407 | 0.252 | 0.186 | 0.066 | 0.304  |
| 500  | 41.81 | 41.50 | 25.94 | 1.32 | 6.84 | 126.64 | 0.419 | 0.262 | 0.194 | 0.150 | 0.335  |
| 1000 | 41.76 | 41.42 | 26.05 | 1.39 | 7.11 | 131.45 | 0.441 | 0.273 | 0.201 | 0.297 | 0.850  |
| 2000 | 41.69 | 41.33 | 25.84 | 1.46 | 7.48 | 136.43 | 0.465 | 0.288 | 0.210 | 0.334 | 1.500  |
| 0    | 40.30 | 39.94 | 21.31 | 1.55 | 8.14 | 105.70 | 0.510 | 0.324 | 0.197 | 0.120 | 0.887  |
| 250  | 40.19 | 39.79 | 23.11 | 1.54 | 7.39 | 111.39 | 0.509 | 0.296 | 0.192 | 0.105 | 0.699  |
| 500  | 40.05 | 39.64 | 23.40 | 1.56 | 7.50 | 116.25 | 0.516 | 0.301 | 0.198 | 0.479 | 1.057  |
| 1000 | 39.96 | 39.50 | 23.63 | 1.65 | 7.65 | 119.45 | 0.547 | 0.308 | 0.201 | 0.950 | 2.150  |
| 2000 | 39.82 | 39.33 | 23.62 | 1.73 | 7.90 | 123.89 | 0.576 | 0.320 | 0.209 | 0.928 | 2.760  |
| 0    | 41.93 | 41.57 | 22.49 | 1.47 | 8.03 | 100.79 | 0.464 | 0.307 | 0.178 | 0.108 | 0.597  |
| 250  | 41.84 | 41.46 | 24.50 | 1.41 | 7.10 | 103.06 | 0.448 | 0.272 | 0.167 | 0.075 | 0.391  |
| 500  | 41.71 | 41.32 | 24.76 | 1.43 | 7.18 | 106.01 | 0.454 | 0.276 | 0.170 | 0.236 | 0.369  |
| 1000 | 41.65 | 41.22 | 25.02 | 1.48 | 7.24 | 107.15 | 0.473 | 0.280 | 0.170 | 0.494 | 0.818  |
| 2000 | 41.55 | 41.09 | 25.00 | 1.56 | 7.50 | 110.70 | 0.497 | 0.291 | 0.176 | 0.564 | 1.460  |
| 0    | 41.54 | 41.27 | 23.49 | 1.26 | 6.94 | 101.89 | 0.401 | 0.268 | 0.173 | 0.118 | 1.452  |
| 250  | 41.42 | 41.12 | 25.55 | 1.24 | 6.16 | 104.31 | 0.397 | 0.239 | 0.162 | 0.083 | 0.802  |
| 500  | 41.30 | 40.97 | 25.76 | 1.27 | 6.25 | 107.14 | 0.407 | 0.243 | 0.165 | 0.291 | 0.891  |
| 1000 | 41.21 | 40.83 | 25.99 | 1.35 | 6.37 | 108.62 | 0.436 | 0.248 | 0.166 | 0.497 | 1.895  |
| 2000 | 41.06 | 40.63 | 25.87 | 1.46 | 6.63 | 111.89 | 0.471 | 0.260 | 0.172 | 0.522 | 2.960  |
| 0    | 41.91 | 41.65 | 25.08 | 1.22 | 6.46 | 103.80 | 0.385 | 0.247 | 0.165 | 0.104 | 0.559  |
| 250  | 41.85 | 41.56 | 27.28 | 1.18 | 5.75 | 108.08 | 0.375 | 0.220 | 0.158 | 0.074 | 0.394  |
| 500  | 41.74 | 41.45 | 27.61 | 1.20 | 5.91 | 115.58 | 0.381 | 0.227 | 0.167 | 0.236 | 0.517  |
| 1000 | 41.69 | 41.30 | 27.88 | 1.27 | 6.22 | 125.88 | 0.405 | 0.239 | 0.180 | 0.440 | 1.325  |
| 2000 | 41.61 | 41.27 | 27.65 | 1.34 | 6.55 | 132.64 | 0.428 | 0.253 | 0.191 | 0.482 | 2.220  |

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|      |    |       |       |       |      |      |        |       |       |       |       |        |
|------|----|-------|-------|-------|------|------|--------|-------|-------|-------|-------|--------|
| 0    | 17 | 42.09 | 41.08 | 23.51 | 1.37 | 7.32 | 106.52 | 0.441 | 0.280 | 0.177 | 0.206 | 3.150  |
| 250  |    | 42.19 | 41.04 | 25.07 | 1.37 | 6.72 | 109.70 | 0.431 | 0.256 | 0.169 | 0.104 | 1.388  |
| 500  |    | 42.06 | 41.68 | 25.90 | 1.41 | 6.98 | 113.95 | 0.446 | 0.267 | 0.175 | 0.240 | 1.078  |
| 1000 |    | 41.97 | 41.54 | 26.16 | 1.52 | 7.35 | 120.82 | 0.481 | 0.281 | 0.184 | 0.417 | 1.476  |
| 2000 |    | 41.86 | 41.39 | 25.97 | 1.62 | 7.75 | 126.76 | 0.513 | 0.298 | 0.194 | 0.444 | 2.240  |
| 0    | 18 | 41.34 | 41.08 | 25.11 | 1.24 | 6.61 | 111.19 | 0.399 | 0.256 | 0.176 | 0.083 | 0.295  |
| 250  |    | 41.25 | 40.95 | 26.92 | 1.25 | 6.10 | 117.93 | 0.401 | 0.237 | 0.174 | 0.063 | 0.269  |
| 500  |    | 41.14 | 40.84 | 26.92 | 1.28 | 6.39 | 127.08 | 0.412 | 0.249 | 0.188 | 0.231 | 0.386  |
| 1000 |    | 41.08 | 40.75 | 26.88 | 1.36 | 6.69 | 133.67 | 0.438 | 0.261 | 0.198 | 0.425 | 1.273  |
| 2000 |    | 40.99 | 40.63 | 26.72 | 1.43 | 7.02 | 140.12 | 0.464 | 0.275 | 0.209 | 0.442 | 2.320  |
| 0    | 19 | 40.69 | 40.42 | 23.28 | 1.27 | 7.03 | 102.32 | 0.415 | 0.277 | 0.175 | 0.084 | 0.401  |
| 250  |    | 40.59 | 40.29 | 25.06 | 1.25 | 6.29 | 104.14 | 0.409 | 0.248 | 0.165 | 0.064 | 0.334  |
| 500  |    | 40.47 | 40.16 | 25.21 | 1.27 | 6.36 | 107.40 | 0.416 | 0.252 | 0.170 | 0.201 | 0.428  |
| 1000 |    | 40.38 | 40.03 | 25.52 | 1.34 | 6.43 | 109.87 | 0.440 | 0.256 | 0.171 | 0.312 | 1.040  |
| 2000 |    | 40.25 | 39.87 | 25.43 | 1.42 | 6.67 | 113.82 | 0.469 | 0.266 | 0.178 | 0.240 | 0.800  |
| 0    | 20 | 42.71 | 42.37 | 26.19 | 1.33 | 6.32 | 106.21 | 0.412 | 0.238 | 0.161 | 0.122 | 1.348  |
| 250  |    | 42.67 | 42.31 | 28.35 | 1.32 | 5.83 | 114.38 | 0.409 | 0.220 | 0.161 | 0.077 | 0.688  |
| 500  |    | 42.56 | 42.20 | 28.50 | 1.33 | 6.09 | 124.41 | 0.414 | 0.230 | 0.174 | 0.274 | 0.824  |
| 1000 |    | 42.53 | 42.15 | 28.67 | 1.38 | 6.37 | 132.57 | 0.432 | 0.241 | 0.184 | 0.568 | 1.198  |
| 2000 |    | 42.47 | 42.08 | 28.56 | 1.43 | 6.66 | 139.20 | 0.448 | 0.252 | 0.194 | 0.624 | 1.980  |
| 0    | 21 | 41.93 | 41.63 | 23.99 | 1.31 | 7.11 | 101.59 | 0.414 | 0.272 | 0.168 | 0.099 | 0.281  |
| 250  |    | 41.81 | 41.48 | 25.76 | 1.25 | 6.45 | 104.03 | 0.411 | 0.247 | 0.161 | 0.061 | 0.239  |
| 500  |    | 41.69 | 41.34 | 26.03 | 1.32 | 6.59 | 108.60 | 0.421 | 0.254 | 0.166 | 0.205 | 0.332  |
| 1000 |    | 41.57 | 41.17 | 26.29 | 1.42 | 6.77 | 112.18 | 0.454 | 0.262 | 0.170 | 0.400 | 1.281  |
| 2000 |    | 41.39 | 40.95 | 26.62 | 1.56 | 7.28 | 129.01 | 0.500 | 0.283 | 0.193 | 1.952 | 3.680  |
| 0    | 22 | 40.47 | 40.12 | 22.61 | 1.45 | 7.32 | 103.60 | 0.476 | 0.290 | 0.182 | 0.110 | 0.899  |
| 250  |    | 40.34 | 39.94 | 24.58 | 1.46 | 6.58 | 106.82 | 0.481 | 0.262 | 0.173 | 0.080 | 0.508  |
| 500  |    | 40.19 | 39.77 | 24.82 | 1.48 | 6.65 | 109.81 | 0.490 | 0.266 | 0.176 | 0.358 | 0.612  |
| 1000 |    | 40.03 | 39.61 | 25.08 | 1.57 | 6.72 | 111.25 | 0.519 | 0.270 | 0.176 | 0.650 | 1.289  |
| 2000 |    | 39.92 | 39.40 | 25.00 | 1.67 | 6.93 | 114.32 | 0.554 | 0.280 | 0.182 | 0.696 | 2.080  |
| 0    | 23 | 40.54 | 40.25 | 22.94 | 1.34 | 7.21 | 101.75 | 0.438 | 0.285 | 0.176 | 0.101 | 0.449  |
| 250  |    | 40.41 | 40.07 | 24.69 | 1.35 | 6.62 | 107.54 | 0.443 | 0.263 | 0.173 | 0.074 | 0.395  |
| 500  |    | 40.27 | 39.92 | 24.87 | 1.39 | 6.88 | 115.53 | 0.459 | 0.274 | 0.185 | 0.289 | 0.616  |
| 1000 |    | 40.19 | 39.80 | 24.80 | 1.50 | 7.21 | 124.17 | 0.494 | 0.288 | 0.199 | 0.508 | 1.513  |
| 2000 |    | 40.06 | 39.63 | 24.64 | 1.59 | 7.54 | 130.50 | 0.527 | 0.303 | 0.211 | 0.538 | 2.300  |
| 0    | 24 | 42.01 | 41.77 | 25.43 | 1.19 | 6.49 | 108.17 | 0.375 | 0.247 | 0.169 | 0.124 | 1.832  |
| 250  |    | 41.93 | 41.66 | 27.73 | 1.16 | 5.85 | 115.10 | 0.369 | 0.224 | 0.165 | 0.068 | 0.761  |
| 500  |    | 41.82 | 41.54 | 27.88 | 1.20 | 6.05 | 121.99 | 0.380 | 0.232 | 0.174 | 0.179 | 0.671  |
| 1000 |    | 41.75 | 41.44 | 28.03 | 1.27 | 6.25 | 126.61 | 0.403 | 0.240 | 0.180 | 0.094 | 0.501  |
| 2000 |    | 41.58 | 41.16 | 23.86 | 1.79 | 9.74 | 160.00 | 0.570 | 0.377 | 0.267 | 1.016 | 26.000 |
| 0    | 25 | 44.13 | 43.77 | 27.36 | 1.31 | 6.11 | 106.33 | 0.393 | 0.222 | 0.155 | 0.162 | 5.800  |
| 250  |    | 44.07 | 43.69 | 30.22 | 1.26 | 5.35 | 109.71 | 0.381 | 0.195 | 0.144 | 0.163 | 2.780  |
| 500  |    | 43.93 | 43.55 | 30.57 | 1.26 | 5.40 | 114.17 | 0.382 | 0.198 | 0.149 | 0.399 | 2.390  |
| 1000 |    | 43.90 | 43.48 | 30.97 | 1.31 | 5.42 | 115.56 | 0.396 | 0.198 | 0.148 | 0.944 | 2.900  |
| 2000 |    | 43.81 | 43.37 | 30.98 | 1.37 | 5.59 | 119.71 | 0.415 | 0.205 | 0.154 | 1.084 | 3.740  |



|    |      |       |       |       |      |      |        |       |       |       |       |       |
|----|------|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 26 | 0    | 41.77 | 41.45 | 28.14 | 1.38 | 5.27 | 110.52 | 0.411 | 0.210 | 0.168 | 0.087 | 0.236 |
|    | 250  | 41.59 | 41.34 | 28.98 | 1.26 | 5.43 | 114.32 | 0.407 | 0.211 | 0.157 | 0.129 | 0.250 |
|    | 500  | 41.56 | 41.21 | 29.61 | 1.27 | 5.52 | 120.06 | 0.405 | 0.213 | 0.161 | 0.132 | 0.484 |
|    | 1000 | 41.50 | 41.14 | 29.97 | 1.31 | 5.53 | 121.51 | 0.420 | 0.214 | 0.161 | 0.142 | 1.061 |
|    | 2000 | 41.44 | 41.03 | 30.14 | 1.36 | 5.72 | 125.99 | 0.442 | 0.222 | 0.162 | 0.166 | 1.740 |
| 27 | 0    | 45.18 | 44.89 | 29.08 | 1.18 | 5.78 | 105.87 | 0.345 | 0.205 | 0.145 | 0.165 | 1.350 |
|    | 250  | 45.13 | 44.82 | 32.47 | 1.12 | 4.95 | 116.46 | 0.331 | 0.176 | 0.135 | 0.127 | 0.555 |
|    | 500  | 45.02 | 44.72 | 33.14 | 1.10 | 4.94 | 115.43 | 0.325 | 0.176 | 0.139 | 0.296 | 0.857 |
|    | 1000 | 44.99 | 44.66 | 33.71 | 1.13 | 4.95 | 117.71 | 0.334 | 0.176 | 0.139 | 0.561 | 1.624 |
|    | 2000 | 44.93 | 44.57 | 34.03 | 1.19 | 5.11 | 123.27 | 0.351 | 0.182 | 0.144 | 0.548 | 2.340 |
| 28 | 0    | 43.67 | 43.37 | 28.23 | 1.17 | 5.66 | 104.18 | 0.356 | 0.208 | 0.146 | 0.106 | 0.782 |
|    | 250  | 43.61 | 43.29 | 31.27 | 1.13 | 4.91 | 107.58 | 0.344 | 0.181 | 0.137 | 0.114 | 0.527 |
|    | 500  | 43.50 | 43.19 | 31.77 | 1.12 | 4.94 | 112.27 | 0.341 | 0.182 | 0.141 | 0.211 | 0.564 |
|    | 1000 | 43.47 | 43.14 | 32.32 | 1.15 | 4.98 | 115.48 | 0.351 | 0.184 | 0.142 | 0.477 | 0.975 |
|    | 2000 | 43.41 | 43.06 | 32.43 | 1.20 | 5.13 | 120.08 | 0.366 | 0.190 | 0.147 | 0.536 | 1.520 |
| 29 | 0    | 44.27 | 43.97 | 28.74 | 1.19 | 5.70 | 105.74 | 0.356 | 0.206 | 0.146 | 0.090 | 0.252 |
|    | 250  | 44.20 | 43.87 | 31.77 | 1.15 | 4.92 | 108.79 | 0.347 | 0.179 | 0.136 | 0.115 | 0.294 |
|    | 500  | 44.08 | 43.76 | 32.28 | 1.14 | 4.97 | 113.68 | 0.344 | 0.181 | 0.140 | 0.248 | 0.387 |
|    | 1000 | 44.04 | 43.68 | 32.73 | 1.19 | 5.02 | 116.18 | 0.358 | 0.183 | 0.141 | 0.417 | 0.860 |
|    | 2000 | 43.95 | 43.56 | 32.93 | 1.26 | 5.20 | 121.71 | 0.379 | 0.190 | 0.147 | 0.538 | 0.580 |
| 30 | 0    | 44.47 | 44.12 | 27.03 | 1.33 | 6.22 | 102.49 | 0.396 | 0.225 | 0.151 | 0.076 | 0.187 |
|    | 250  | 44.42 | 44.03 | 29.71 | 1.31 | 5.58 | 106.84 | 0.392 | 0.202 | 0.143 | 0.113 | 0.291 |
|    | 500  | 44.29 | 43.91 | 29.89 | 1.30 | 5.66 | 109.87 | 0.390 | 0.205 | 0.146 | 0.285 | 0.434 |
|    | 1000 | 44.25 | 43.83 | 30.25 | 1.35 | 5.80 | 112.74 | 0.406 | 0.211 | 0.148 | 0.576 | 0.941 |
|    | 2000 | 44.18 | 43.74 | 30.15 | 1.41 | 6.03 | 116.37 | 0.425 | 0.220 | 0.154 | 0.600 | 1.480 |
| 31 | 0    | 43.88 | 43.52 | 27.79 | 1.32 | 5.91 | 102.57 | 0.398 | 0.216 | 0.147 | 0.121 | 0.720 |
|    | 250  | 43.83 | 43.44 | 31.05 | 1.28 | 5.11 | 107.84 | 0.388 | 0.187 | 0.136 | 0.119 | 0.464 |
|    | 500  | 43.70 | 43.31 | 31.70 | 1.26 | 5.12 | 113.49 | 0.383 | 0.188 | 0.142 | 0.363 | 0.654 |
|    | 1000 | 43.65 | 43.23 | 32.19 | 1.31 | 5.20 | 117.09 | 0.399 | 0.191 | 0.145 | 0.636 | 1.491 |
|    | 2000 | 43.56 | 43.11 | 32.24 | 1.38 | 5.39 | 122.06 | 0.422 | 0.199 | 0.151 | 0.640 | 2.360 |
| 32 | 0    | 44.71 | 44.41 | 27.79 | 1.23 | 6.21 | 109.32 | 0.365 | 0.223 | 0.157 | 0.407 | 3.350 |
|    | 250  | 44.62 | 44.30 | 31.00 | 1.19 | 5.39 | 115.69 | 0.354 | 0.194 | 0.148 | 0.353 | 1.468 |
|    | 500  | 44.50 | 44.17 | 31.46 | 1.19 | 5.41 | 120.76 | 0.355 | 0.195 | 0.153 | 0.457 | 2.630 |
|    | 1000 | 44.44 | 44.07 | 32.16 | 1.25 | 5.48 | 125.23 | 0.373 | 0.198 | 0.155 | 0.665 | 3.140 |
|    | 2000 | 44.34 | 43.94 | 32.22 | 1.33 | 5.75 | 132.61 | 0.399 | 0.208 | 0.164 | 0.666 | 3.506 |
| 33 | 0    | 43.93 | 43.66 | 27.46 | 1.15 | 5.91 | 103.82 | 0.349 | 0.215 | 0.149 | 0.058 | 0.150 |
|    | 250  | 43.86 | 43.56 | 30.45 | 1.12 | 5.16 | 108.67 | 0.340 | 0.189 | 0.142 | 0.089 | 1.464 |
|    | 500  | 43.74 | 43.43 | 31.03 | 1.13 | 5.21 | 114.63 | 0.342 | 0.191 | 0.147 | 0.251 | 0.357 |
|    | 1000 | 43.66 | 43.32 | 31.46 | 1.19 | 5.30 | 118.14 | 0.360 | 0.195 | 0.149 | 0.535 | 1.085 |
|    | 2000 | 43.56 | 43.19 | 31.51 | 1.26 | 5.49 | 123.18 | 0.383 | 0.202 | 0.156 | 0.550 | 1.903 |
| 34 | 0    | 45.09 | 44.79 | 29.06 | 1.17 | 5.65 | 104.01 | 0.343 | 0.201 | 0.142 | 0.131 | 1.430 |
|    | 250  | 45.03 | 44.72 | 32.29 | 1.13 | 4.91 | 109.08 | 0.332 | 0.175 | 0.134 | 0.102 | 0.564 |
|    | 500  | 44.92 | 44.60 | 32.99 | 1.11 | 4.95 | 115.16 | 0.329 | 0.176 | 0.139 | 0.206 | 0.591 |
|    | 1000 | 44.87 | 44.52 | 31.91 | 1.23 | 5.59 | 122.79 | 0.364 | 0.200 | 0.153 | 1.369 | 6.810 |
|    | 2000 | 44.79 | 44.40 | 31.23 | 1.33 | 6.09 | 128.49 | 0.393 | 0.218 | 0.164 | 2.380 | 8.640 |

|      |       |       |       |      |      |        |       |       |       |       |       |
|------|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 43.65 | 43.65 | 27.67 | 1.51 | 5.55 | 400.01 | 0.455 | 0.210 | 0.144 | 0.141 | 1.525 |
| 250  | 43.61 | 43.29 | 30.81 | 1.12 | 4.94 | 102.59 | 0.354 | 0.130 | 0.137 | 0.121 | 0.987 |
| 500  | 43.50 | 43.16 | 31.30 | 1.15 | 4.88 | 106.20 | 0.352 | 0.100 | 0.135 | 0.360 | 1.022 |
| 1000 | 43.45 | 43.08 | 31.92 | 1.20 | 4.92 | 108.46 | 0.365 | 0.135 | 0.135 | 0.755 | 1.647 |
| 2000 | 43.32 | 42.97 | 31.85 | 1.26 | 5.10 | 114.28 | 0.366 | 0.192 | 0.143 | 1.024 | 5.740 |
| 36   | 43.26 | 42.88 | 24.86 | 1.40 | 7.35 | 110.01 | 0.453 | 0.273 | 0.176 | 0.083 | 0.212 |
| 250  | 43.15 | 42.72 | 27.50 | 1.47 | 6.51 | 112.89 | 0.451 | 0.243 | 0.163 | 0.099 | 0.267 |
| 500  | 43.00 | 42.56 | 27.69 | 1.40 | 6.63 | 116.39 | 0.457 | 0.248 | 0.167 | 0.301 | 0.384 |
| 1000 | 42.94 | 42.45 | 27.88 | 1.55 | 6.79 | 118.43 | 0.480 | 0.255 | 0.169 | 0.715 | 0.865 |
| 2000 | 42.85 | 42.32 | 27.73 | 1.64 | 7.09 | 122.50 | 0.507 | 0.267 | 0.176 | 0.750 | 1.520 |
| 37   | 42.94 | 42.61 | 24.29 | 1.38 | 7.42 | 105.93 | 0.427 | 0.277 | 0.174 | 0.072 | 0.171 |
| 250  | 42.05 | 42.51 | 27.06 | 1.32 | 6.40 | 108.58 | 0.409 | 0.240 | 0.160 | 0.084 | 0.194 |
| 500  | 42.73 | 42.38 | 27.52 | 1.33 | 6.51 | 113.22 | 0.413 | 0.244 | 0.164 | 0.215 | 0.276 |
| 1000 | 42.68 | 42.29 | 27.70 | 1.39 | 6.69 | 115.20 | 0.433 | 0.252 | 0.166 | 0.506 | 0.701 |
| 2000 | 42.61 | 42.17 | 27.45 | 1.47 | 7.00 | 118.03 | 0.458 | 0.264 | 0.171 | 0.530 | 1.300 |
| 38   | 42.64 | 42.46 | 24.54 | 1.51 | 7.54 | 112.53 | 0.466 | 0.283 | 0.182 | 0.086 | 0.442 |
| 250  | 42.71 | 42.27 | 26.78 | 1.53 | 6.88 | 114.78 | 0.475 | 0.259 | 0.171 | 0.100 | 0.354 |
| 500  | 42.55 | 42.09 | 26.86 | 1.57 | 7.14 | 119.05 | 0.408 | 0.270 | 0.176 | 0.365 | 0.525 |
| 1000 | 42.44 | 41.92 | 26.82 | 1.69 | 7.48 | 122.04 | 0.530 | 0.284 | 0.181 | 0.734 | 1.156 |
| 2000 | 42.29 | 41.71 | 26.49 | 1.82 | 7.89 | 125.68 | 0.572 | 0.301 | 0.189 | 0.714 | 1.960 |
| 39   | 44.30 | 44.00 | 28.46 | 1.19 | 5.80 | 107.31 | 0.356 | 0.210 | 0.150 | 0.117 | 0.523 |
| 250  | 44.23 | 43.91 | 31.22 | 1.15 | 5.07 | 108.85 | 0.346 | 0.184 | 0.139 | 0.087 | 0.400 |
| 500  | 44.11 | 43.79 | 31.53 | 1.15 | 5.15 | 113.29 | 0.346 | 0.187 | 0.143 | 0.194 | 0.394 |
| 1000 | 44.06 | 43.71 | 31.99 | 1.20 | 5.25 | 116.92 | 0.363 | 0.191 | 0.145 | 0.489 | 0.747 |
| 2000 | 43.92 | 43.61 | 31.84 | 1.26 | 5.47 | 121.36 | 0.381 | 0.200 | 0.152 | 0.488 | 1.640 |
| 40   | 41.87 | 41.57 | 25.26 | 1.32 | 6.78 | 116.23 | 0.419 | 0.260 | 0.183 | 0.113 | 0.393 |
| 250  | 41.70 | 41.33 | 28.03 | 1.36 | 6.10 | 123.69 | 0.432 | 0.235 | 0.176 | 0.109 | 0.407 |
| 500  | 41.52 | 41.12 | 28.46 | 1.41 | 6.28 | 131.49 | 0.451 | 0.243 | 0.184 | 0.333 | 0.597 |
| 1000 | 41.31 | 40.63 | 28.69 | 1.59 | 6.55 | 137.40 | 0.510 | 0.255 | 0.191 | 0.583 | 1.263 |
| 2000 | 41.03 | 40.47 | 28.61 | 1.77 | 6.93 | 145.38 | 0.572 | 0.273 | 0.202 | 0.538 | 1.880 |
| 41   | 44.15 | 43.81 | 25.99 | 1.33 | 6.62 | 103.30 | 0.401 | 0.241 | 0.158 | 0.092 | 0.740 |
| 250  | 44.07 | 43.70 | 28.92 | 1.29 | 5.67 | 103.50 | 0.387 | 0.207 | 0.142 | 0.089 | 0.400 |
| 500  | 43.94 | 43.56 | 29.11 | 1.30 | 5.84 | 107.34 | 0.392 | 0.213 | 0.147 | 0.074 | 0.283 |
| 1000 | 43.90 | 43.48 | 29.71 | 1.41 | 6.44 | 113.53 | 0.425 | 0.236 | 0.157 | 0.090 | 0.288 |
| 2000 | 43.80 | 43.33 | 27.59 | 1.56 | 7.33 | 119.33 | 0.472 | 0.269 | 0.172 | 0.074 | 0.300 |
| 42   | 43.90 | 43.56 | 26.93 | 1.20 | 6.10 | 101.47 | 0.388 | 0.223 | 0.150 | 0.081 | 0.378 |
| 250  | 43.80 | 43.42 | 29.40 | 1.28 | 5.40 | 102.27 | 0.387 | 0.198 | 0.138 | 0.089 | 0.322 |
| 500  | 43.63 | 43.22 | 29.46 | 1.33 | 5.63 | 105.65 | 0.404 | 0.207 | 0.143 | 0.274 | 0.528 |
| 1000 | 43.52 | 43.04 | 29.47 | 1.45 | 5.85 | 107.01 | 0.441 | 0.216 | 0.144 | 0.513 | 1.113 |
| 2000 | 43.37 | 42.83 | 29.23 | 1.56 | 6.15 | 110.23 | 0.476 | 0.228 | 0.150 | 0.486 | 1.680 |
| 43   | 43.15 | 42.75 | 22.72 | 1.66 | 9.17 | 117.71 | 0.510 | 0.342 | 0.206 | 0.064 | 0.162 |
| 250  | 43.02 | 42.65 | 24.91 | 1.62 | 8.23 | 119.52 | 0.499 | 0.307 | 0.191 | 0.091 | 0.255 |
| 500  | 42.93 | 42.46 | 25.19 | 1.66 | 8.39 | 123.69 | 0.512 | 0.314 | 0.195 | 0.312 | 0.406 |
| 1000 | 42.85 | 42.31 | 25.45 | 1.76 | 8.58 | 126.88 | 0.544 | 0.323 | 0.198 | 0.664 | 0.838 |
| 2000 | 42.73 | 42.15 | 25.37 | 1.87 | 8.96 | 132.54 | 0.579 | 0.338 | 0.208 | 0.678 | 1.380 |

|      |    |       |       |       |      |      |        |       |       |       |       |       |
|------|----|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 44 | 44.13 | 43.81 | 24.43 | 1.36 | 7.57 | 105.01 | 0.403 | 0.274 | 0.171 | 0.077 | 0.285 |
| 250  |    | 44.02 | 43.87 | 26.26 | 1.33 | 6.79 | 107.89 | 0.400 | 0.247 | 0.150 | 0.078 | 0.247 |
| 500  |    | 43.99 | 43.52 | 27.04 | 1.37 | 7.01 | 112.06 | 0.413 | 0.252 | 0.165 | 0.202 | 0.338 |
| 1000 |    | 43.80 | 43.37 | 27.16 | 1.46 | 7.26 | 114.35 | 0.443 | 0.266 | 0.168 | 0.408 | 0.860 |
| 2000 |    | 43.68 | 43.20 | 28.95 | 1.59 | 7.62 | 117.86 | 0.477 | 0.281 | 0.174 | 0.402 | 1.380 |
| 0    | 45 | 43.61 | 43.33 | 26.56 | 1.19 | 6.14 | 97.39  | 0.363 | 0.226 | 0.146 | 0.082 | 0.308 |
| 250  |    | 43.51 | 43.18 | 29.13 | 1.17 | 5.31 | 95.78  | 0.357 | 0.195 | 0.131 | 0.084 | 0.244 |
| 500  |    | 43.37 | 43.02 | 29.41 | 1.19 | 5.39 | 97.55  | 0.365 | 0.199 | 0.132 | 0.258 | 0.452 |
| 1000 |    | 43.27 | 42.87 | 29.57 | 1.28 | 5.53 | 97.84  | 0.391 | 0.205 | 0.132 | 0.456 | 1.177 |
| 2000 |    | 43.15 | 42.71 | 29.58 | 1.36 | 5.77 | 100.31 | 0.419 | 0.215 | 0.136 | 0.442 | 1.860 |
| 0    | 46 | 43.25 | 42.93 | 26.49 | 1.26 | 6.07 | 101.44 | 0.385 | 0.225 | 0.152 | 0.167 | 0.900 |
| 250  |    | 43.17 | 42.82 | 29.17 | 1.22 | 5.25 | 101.00 | 0.375 | 0.195 | 0.138 | 0.090 | 0.575 |
| 500  |    | 43.05 | 42.68 | 29.50 | 1.23 | 5.31 | 103.63 | 0.378 | 0.198 | 0.140 | 0.237 | 0.573 |
| 1000 |    | 42.99 | 42.59 | 29.66 | 1.29 | 5.39 | 104.25 | 0.397 | 0.202 | 0.140 | 0.545 | 0.894 |
| 2000 |    | 42.90 | 42.48 | 29.49 | 1.35 | 5.60 | 107.00 | 0.416 | 0.210 | 0.144 | 0.548 | 1.280 |
| 0    | 47 | 42.91 | 42.62 | 26.93 | 1.22 | 6.06 | 106.72 | 0.377 | 0.226 | 0.158 | 0.068 | 0.180 |
| 250  |    | 42.85 | 42.53 | 29.88 | 1.18 | 5.27 | 111.51 | 0.365 | 0.197 | 0.148 | 0.075 | 0.198 |
| 500  |    | 42.72 | 42.41 | 30.32 | 1.18 | 5.32 | 116.80 | 0.366 | 0.200 | 0.153 | 0.209 | 0.311 |
| 1000 |    | 42.67 | 42.33 | 30.72 | 1.22 | 5.41 | 120.27 | 0.381 | 0.203 | 0.156 | 0.474 | 0.699 |
| 2000 |    | 42.61 | 42.24 | 30.67 | 1.27 | 5.61 | 125.04 | 0.395 | 0.211 | 0.162 | 0.486 | 1.120 |
| 0    | 48 | 44.68 | 44.33 | 28.31 | 1.25 | 5.77 | 98.17  | 0.372 | 0.207 | 0.138 | 0.131 | 0.886 |
| 250  |    | 44.62 | 44.25 | 31.34 | 1.20 | 4.90 | 98.78  | 0.357 | 0.176 | 0.125 | 0.087 | 0.515 |
| 500  |    | 44.48 | 44.11 | 32.05 | 1.19 | 4.90 | 103.49 | 0.352 | 0.177 | 0.128 | 0.278 | 0.464 |
| 1000 |    | 44.42 | 44.00 | 32.47 | 1.26 | 4.96 | 105.11 | 0.376 | 0.180 | 0.129 | 0.612 | 1.131 |
| 2000 |    | 44.32 | 43.87 | 32.30 | 1.32 | 5.14 | 108.08 | 0.395 | 0.187 | 0.133 | 0.586 | 1.780 |

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\*\*\* SPRING ELECTRIC SURGE CURRENT TEST PROGRAM \*\*\*

--- CONTROL UNITS ---

11/14/79

11F TEST -- 85C.35VOLTS

| HOURS | UNIT NO. | CAPACITANCE (UF) |       |       |  | DISSIPATION FACTOR (Z) |       |        |  | ESR (OHMS) |       |       |  | DCL (UA) |       | FUSE BLOW |
|-------|----------|------------------|-------|-------|--|------------------------|-------|--------|--|------------|-------|-------|--|----------|-------|-----------|
|       |          | 120HZ            | 1KHZ  | 40KHZ |  | 120HZ                  | 1KHZ  | 40KHZ  |  | 120HZ      | 1KHZ  | 40KHZ |  | 25C      | 85C   |           |
| 0     | 1        | 41.80            | 41.56 | 25.34 |  | 1.18                   | 6.35  | 108.05 |  | 0.373      | 0.243 | 0.170 |  | 0.154    | 2.240 |           |
| 250   |          | 41.83            | 41.58 | 26.32 |  | 1.16                   | 5.99  | 108.17 |  | 0.369      | 0.229 | 0.164 |  | 0.093    | 0.335 |           |
| 500   |          | 41.79            | 41.54 | 26.12 |  | 1.16                   | 6.05  | 108.60 |  | 0.367      | 0.232 | 0.165 |  | 0.092    | 1.556 |           |
| 1000  |          | 41.74            | 41.50 | 26.27 |  | 1.12                   | 5.96  | 108.65 |  | 0.356      | 0.229 | 0.165 |  | 0.098    | 1.630 |           |
| 2000  |          | 41.72            | 41.48 | 26.75 |  | 1.12                   | 5.89  | 110.09 |  | 0.357      | 0.226 | 0.164 |  | 0.103    | 0.258 |           |
| 0     | 2        | 40.20            | 39.80 | 22.02 |  | 1.57                   | 7.66  | 97.79  |  | 0.519      | 0.306 | 0.177 |  | 0.115    | 0.560 |           |
| 250   |          | 40.20            | 39.82 | 22.74 |  | 1.50                   | 7.23  | 97.58  |  | 0.496      | 0.289 | 0.171 |  | 0.089    | 0.334 |           |
| 500   |          | 40.14            | 39.76 | 22.47 |  | 1.49                   | 7.30  | 97.43  |  | 0.494      | 0.292 | 0.173 |  | 0.084    | 0.389 |           |
| 1000  |          | 40.09            | 39.73 | 22.60 |  | 1.46                   | 7.19  | 97.23  |  | 0.482      | 0.288 | 0.171 |  | 0.095    | 0.378 |           |
| 2000  |          | 40.06            | 39.69 | 22.92 |  | 1.46                   | 7.10  | 97.97  |  | 0.484      | 0.285 | 0.170 |  | 0.085    | 0.408 |           |
| 0     | 3        | 41.49            | 41.19 | 24.56 |  | 1.35                   | 6.95  | 114.17 |  | 0.430      | 0.269 | 0.185 |  | 0.090    | 0.350 |           |
| 250   |          | 41.47            | 41.20 | 25.33 |  | 1.26                   | 6.55  | 113.15 |  | 0.404      | 0.253 | 0.178 |  | 0.069    | 0.175 |           |
| 500   |          | 41.41            | 41.15 | 25.21 |  | 1.25                   | 6.62  | 114.56 |  | 0.401      | 0.256 | 0.181 |  | 0.060    | 0.211 |           |
| 1000  |          | 41.37            | 41.12 | 25.33 |  | 1.21                   | 6.52  | 114.02 |  | 0.390      | 0.252 | 0.179 |  | 0.071    | 0.224 |           |
| 2000  |          | 41.35            | 41.09 | 25.75 |  | 1.22                   | 6.46  | 115.88 |  | 0.391      | 0.250 | 0.179 |  | 0.060    | 0.196 |           |
| 0     | 4        | 41.68            | 41.33 | 23.35 |  | 1.46                   | 7.47  | 104.95 |  | 0.465      | 0.288 | 0.179 |  | 0.093    | 0.280 |           |
| 250   |          | 41.64            | 41.31 | 24.12 |  | 1.38                   | 7.05  | 104.85 |  | 0.439      | 0.272 | 0.173 |  | 0.069    | 0.125 |           |
| 500   |          | 41.57            | 41.25 | 23.90 |  | 1.37                   | 7.13  | 105.23 |  | 0.437      | 0.275 | 0.175 |  | 0.061    | 0.162 |           |
| 1000  |          | 41.52            | 41.21 | 24.08 |  | 1.34                   | 7.01  | 104.96 |  | 0.427      | 0.271 | 0.173 |  | 0.066    | 0.172 |           |
| 2000  |          | 41.49            | 41.17 | 24.36 |  | 1.34                   | 6.93  | 105.34 |  | 0.429      | 0.268 | 0.172 |  | 0.059    | 0.134 |           |
| 0     | 5        | 40.49            | 40.16 | 22.01 |  | 1.46                   | 7.89  | 101.76 |  | 0.480      | 0.313 | 0.184 |  | 0.084    | 0.260 |           |
| 250   |          | 40.46            | 40.15 | 22.70 |  | 1.37                   | 7.42  | 101.18 |  | 0.451      | 0.294 | 0.177 |  | 0.067    | 0.124 |           |
| 500   |          | 40.40            | 40.09 | 22.52 |  | 1.37                   | 7.52  | 101.76 |  | 0.451      | 0.299 | 0.180 |  | 0.057    | 0.159 |           |
| 1000  |          | 40.36            | 40.06 | 22.68 |  | 1.34                   | 7.40  | 101.39 |  | 0.440      | 0.294 | 0.178 |  | 0.066    | 0.170 |           |
| 2000  |          | 40.34            | 40.03 | 23.01 |  | 1.34                   | 7.32  | 102.15 |  | 0.442      | 0.291 | 0.177 |  | 0.057    | 0.134 |           |
| 0     | 6        | 41.41            | 40.93 | 20.88 |  | 1.69                   | 10.58 | 122.17 |  | 0.605      | 0.411 | 0.233 |  | 0.096    | 0.309 |           |
| 250   |          | 41.40            | 40.96 | 21.51 |  | 1.77                   | 10.05 | 121.48 |  | 0.568      | 0.391 | 0.225 |  | 0.083    | 0.175 |           |
| 500   |          | 41.34            | 40.90 | 21.23 |  | 1.77                   | 10.23 | 121.21 |  | 0.569      | 0.398 | 0.227 |  | 0.070    | 0.221 |           |
| 1000  |          | 41.30            | 40.88 | 21.41 |  | 1.73                   | 10.05 | 120.45 |  | 0.556      | 0.391 | 0.224 |  | 0.070    | 0.235 |           |
| 2000  |          | 41.27            | 40.85 | 21.70 |  | 1.73                   | 9.94  | 120.95 |  | 0.555      | 0.387 | 0.222 |  | 0.063    | 0.212 |           |
| 0     | 7        | 42.24            | 41.79 | 23.06 |  | 1.63                   | 7.82  | 96.80  |  | 0.513      | 0.290 | 0.167 |  | 0.104    | 0.413 |           |
| 250   |          | 42.24            | 41.81 | 23.62 |  | 1.55                   | 7.38  | 96.82  |  | 0.480      | 0.281 | 0.162 |  | 0.080    | 0.209 |           |
| 500   |          | 42.16            | 41.74 | 23.58 |  | 1.53                   | 7.45  | 96.96  |  | 0.483      | 0.284 | 0.164 |  | 0.068    | 0.269 |           |
| 1000  |          | 42.11            | 41.71 | 23.75 |  | 1.50                   | 7.29  | 96.43  |  | 0.471      | 0.278 | 0.162 |  | 0.079    | 0.297 |           |
| 2000  |          | 42.07            | 41.66 | 24.08 |  | 1.50                   | 7.21  | 97.37  |  | 0.473      | 0.276 | 0.161 |  | 0.070    | 0.242 |           |

|      |       |       |       |      |      |        |       |       |       |       |       |
|------|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 41.70 | 41.40 | 25.77 | 1.31 | 6.37 | 106.11 | 0.417 | 0.246 | 0.167 | 0.118 | 0.580 |
| 250  | 41.72 | 41.41 | 25.09 | 1.30 | 6.05 | 105.94 | 0.406 | 0.232 | 0.162 | 0.099 | 0.460 |
| 500  | 41.65 | 41.35 | 25.91 | 1.26 | 6.11 | 106.69 | 0.401 | 0.235 | 0.164 | 0.090 | 0.481 |
| 1000 | 41.62 | 41.33 | 26.05 | 1.22 | 5.99 | 106.16 | 0.390 | 0.231 | 0.162 | 0.104 | 0.524 |
| 2000 | 41.59 | 41.30 | 26.56 | 1.23 | 5.91 | 103.63 | 0.391 | 0.229 | 0.163 | 0.091 | 0.498 |
| 0    | 41.59 | 41.26 | 24.78 | 1.40 | 6.55 | 107.81 | 0.446 | 0.257 | 0.173 | 0.101 | 0.544 |
| 250  | 41.56 | 41.26 | 25.53 | 1.32 | 6.25 | 106.29 | 0.423 | 0.241 | 0.166 | 0.078 | 0.395 |
| 500  | 41.51 | 41.20 | 25.35 | 1.31 | 6.32 | 107.37 | 0.419 | 0.244 | 0.169 | 0.067 | 0.334 |
| 1000 | 41.47 | 41.17 | 25.53 | 1.27 | 6.20 | 107.09 | 0.407 | 0.240 | 0.167 | 0.076 | 0.348 |
| 2000 | 41.44 | 41.13 | 25.97 | 1.26 | 6.14 | 108.87 | 0.410 | 0.238 | 0.167 | 0.069 | 0.416 |
| 0    | 41.43 | 41.11 | 23.38 | 1.40 | 7.30 | 104.46 | 0.443 | 0.283 | 0.178 | 0.090 | 0.281 |
| 250  | 41.39 | 41.09 | 24.16 | 1.32 | 6.89 | 104.62 | 0.423 | 0.267 | 0.172 | 0.067 | 0.133 |
| 500  | 41.32 | 41.03 | 23.88 | 1.31 | 6.97 | 104.39 | 0.421 | 0.270 | 0.174 | 0.054 | 0.163 |
| 1000 | 41.28 | 40.99 | 24.02 | 1.28 | 6.85 | 104.11 | 0.411 | 0.266 | 0.172 | 0.061 | 0.176 |
| 2000 | 41.25 | 40.95 | 24.35 | 1.29 | 6.80 | 105.24 | 0.414 | 0.264 | 0.172 | 0.053 | 0.142 |
| 0    | 42.29 | 41.97 | 25.37 | 1.37 | 6.87 | 110.90 | 0.430 | 0.261 | 0.174 | 0.094 | 0.333 |
| 250  | 42.25 | 41.96 | 26.08 | 1.28 | 6.47 | 109.57 | 0.401 | 0.246 | 0.167 | 0.071 | 0.144 |
| 500  | 42.19 | 41.90 | 25.75 | 1.27 | 6.59 | 110.57 | 0.400 | 0.250 | 0.171 | 0.060 | 0.179 |
| 1000 | 42.15 | 41.87 | 25.87 | 1.24 | 6.50 | 110.62 | 0.391 | 0.247 | 0.170 | 0.065 | 0.189 |
| 2000 | 42.12 | 41.83 | 26.16 | 1.25 | 6.49 | 112.54 | 0.395 | 0.247 | 0.171 | 0.058 | 0.140 |
| 0    | 41.85 | 41.53 | 24.72 | 1.34 | 6.80 | 105.03 | 0.426 | 0.261 | 0.169 | 0.123 | 0.866 |
| 250  | 41.84 | 41.53 | 25.57 | 1.28 | 6.40 | 104.32 | 0.406 | 0.245 | 0.162 | 0.090 | 0.530 |
| 500  | 41.78 | 41.48 | 25.42 | 1.28 | 6.47 | 105.27 | 0.407 | 0.248 | 0.165 | 0.073 | 0.525 |
| 1000 | 41.74 | 41.44 | 25.58 | 1.25 | 6.38 | 105.68 | 0.398 | 0.245 | 0.164 | 0.075 | 0.535 |
| 2000 | 41.70 | 41.40 | 25.96 | 1.26 | 6.35 | 107.29 | 0.401 | 0.244 | 0.164 | 0.071 | 0.604 |
| 0    | 42.55 | 42.22 | 23.03 | 1.41 | 7.95 | 103.67 | 0.441 | 0.300 | 0.179 | 0.187 | 3.380 |
| 250  | 42.57 | 42.24 | 23.80 | 1.40 | 7.57 | 104.12 | 0.436 | 0.285 | 0.174 | 0.129 | 2.360 |
| 500  | 42.52 | 42.19 | 23.55 | 1.41 | 7.67 | 104.35 | 0.439 | 0.289 | 0.176 | 0.120 | 2.390 |
| 1000 | 42.48 | 42.16 | 23.69 | 1.37 | 7.55 | 104.13 | 0.428 | 0.285 | 0.175 | 0.131 | 2.500 |
| 2000 | 42.46 | 42.13 | 24.03 | 1.38 | 7.47 | 105.30 | 0.430 | 0.282 | 0.174 | 0.130 | 3.500 |
| 0    | 42.71 | 42.40 | 24.60 | 1.38 | 6.99 | 111.91 | 0.427 | 0.262 | 0.181 | 0.080 | 0.350 |
| 250  | 42.70 | 42.41 | 25.43 | 1.30 | 6.61 | 112.08 | 0.405 | 0.248 | 0.175 | 0.064 | 0.193 |
| 500  | 42.65 | 42.36 | 25.23 | 1.30 | 6.68 | 112.45 | 0.404 | 0.251 | 0.177 | 0.056 | 0.234 |
| 1000 | 42.62 | 42.34 | 25.35 | 1.26 | 6.55 | 111.71 | 0.392 | 0.246 | 0.175 | 0.065 | 0.282 |
| 2000 | 42.60 | 42.31 | 25.80 | 1.26 | 6.47 | 113.36 | 0.391 | 0.243 | 0.175 | 0.058 | 0.296 |
| 0    | 40.80 | 40.48 | 23.90 | 1.37 | 6.95 | 104.89 | 0.446 | 0.273 | 0.175 | 0.175 | 3.070 |
| 250  | 40.81 | 40.49 | 24.54 | 1.36 | 6.62 | 104.37 | 0.442 | 0.260 | 0.169 | 0.109 | 1.867 |
| 500  | 40.75 | 40.43 | 24.34 | 1.35 | 6.70 | 105.05 | 0.441 | 0.264 | 0.172 | 0.097 | 1.917 |
| 1000 | 40.71 | 40.40 | 24.41 | 1.32 | 6.58 | 104.19 | 0.431 | 0.259 | 0.170 | 0.100 | 1.963 |
| 2000 | 40.68 | 40.36 | 24.74 | 1.33 | 6.53 | 105.54 | 0.434 | 0.258 | 0.170 | 0.107 | 3.060 |
| 0    | 40.55 | 40.23 | 23.16 | 1.44 | 7.25 | 114.63 | 0.471 | 0.287 | 0.197 | 0.090 | 0.278 |
| 250  | 40.50 | 40.20 | 23.96 | 1.35 | 6.86 | 115.14 | 0.443 | 0.272 | 0.191 | 0.068 | 0.328 |
| 500  | 40.44 | 40.15 | 23.75 | 1.34 | 6.96 | 116.33 | 0.440 | 0.276 | 0.195 | 0.053 | 0.158 |
| 1000 | 40.39 | 40.11 | 23.99 | 1.31 | 6.85 | 117.00 | 0.430 | 0.272 | 0.194 | 0.055 | 0.169 |
| 2000 | 40.36 | 40.07 | 24.35 | 1.32 | 6.83 | 119.23 | 0.434 | 0.271 | 0.195 | 0.052 | 0.116 |

|      |    |       |       |       |      |      |        |       |       |       |       |       |
|------|----|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 17 | 40.35 | 39.95 | 22.82 | 1.55 | 7.21 | 96.42  | 0.502 | 0.267 | 0.172 | 0.097 | 0.302 |
| 250  |    | 40.31 | 39.94 | 23.45 | 1.44 | 6.81 | 97.43  | 0.474 | 0.271 | 0.165 | 0.073 | 0.155 |
| 500  |    | 40.24 | 39.88 | 23.21 | 1.42 | 6.85 | 97.25  | 0.469 | 0.274 | 0.167 | 0.060 | 0.197 |
| 1000 |    | 40.19 | 39.84 | 23.41 | 1.38 | 6.74 | 97.40  | 0.457 | 0.269 | 0.166 | 0.070 | 0.220 |
| 2000 |    | 40.15 | 39.79 | 23.67 | 1.40 | 6.69 | 98.14  | 0.462 | 0.268 | 0.165 | 0.059 | 0.164 |
| 0    | 18 | 41.49 | 41.13 | 24.15 | 1.44 | 6.93 | 105.16 | 0.460 | 0.268 | 0.173 | 0.167 | 1.979 |
| 250  |    | 41.52 | 41.15 | 24.97 | 1.42 | 6.57 | 105.10 | 0.453 | 0.254 | 0.167 | 0.123 | 1.366 |
| 500  |    | 41.45 | 41.09 | 24.71 | 1.40 | 6.63 | 105.50 | 0.450 | 0.257 | 0.170 | 0.114 | 1.429 |
| 1000 |    | 41.41 | 41.06 | 24.92 | 1.36 | 6.50 | 105.02 | 0.437 | 0.252 | 0.168 | 0.131 | 1.672 |
| 2000 |    | 41.37 | 41.02 | 25.27 | 1.37 | 6.43 | 105.99 | 0.440 | 0.249 | 0.167 | 0.128 | 2.240 |
| 0    | 19 | 40.53 | 40.17 | 22.76 | 1.51 | 7.52 | 104.83 | 0.493 | 0.298 | 0.183 | 0.099 | 0.653 |
| 250  |    | 40.53 | 40.18 | 23.42 | 1.44 | 7.11 | 104.29 | 0.473 | 0.282 | 0.177 | 0.072 | 0.366 |
| 500  |    | 40.46 | 40.13 | 23.14 | 1.43 | 7.19 | 104.62 | 0.468 | 0.285 | 0.180 | 0.061 | 0.383 |
| 1000 |    | 40.42 | 40.09 | 23.22 | 1.39 | 7.07 | 104.20 | 0.455 | 0.281 | 0.179 | 0.073 | 0.426 |
| 2000 |    | 40.38 | 40.06 | 23.48 | 1.40 | 7.05 | 105.68 | 0.460 | 0.280 | 0.179 | 0.060 | 0.424 |
| 0    | 20 | 42.66 | 42.41 | 26.00 | 1.18 | 6.29 | 105.68 | 0.367 | 0.236 | 0.162 | 0.125 | 1.025 |
| 250  |    | 42.66 | 42.42 | 26.82 | 1.13 | 5.96 | 105.62 | 0.352 | 0.224 | 0.157 | 0.092 | 0.750 |
| 500  |    | 42.62 | 42.38 | 26.45 | 1.12 | 6.03 | 105.38 | 0.349 | 0.227 | 0.159 | 0.088 | 0.813 |
| 1000 |    | 42.59 | 42.36 | 26.62 | 1.09 | 5.92 | 104.69 | 0.340 | 0.222 | 0.156 | 0.100 | 0.851 |
| 2000 |    | 42.56 | 42.34 | 27.04 | 1.09 | 5.87 | 106.19 | 0.340 | 0.221 | 0.156 | 0.091 | 0.950 |
| 0    | 21 | 41.46 | 41.15 | 25.44 | 1.31 | 6.31 | 106.21 | 0.418 | 0.244 | 0.166 | 0.103 | 0.993 |
| 250  |    | 41.48 | 41.16 | 26.21 | 1.28 | 6.00 | 105.88 | 0.410 | 0.232 | 0.160 | 0.082 | 0.686 |
| 500  |    | 41.41 | 41.11 | 25.93 | 1.26 | 6.05 | 105.80 | 0.405 | 0.234 | 0.162 | 0.072 | 0.737 |
| 1000 |    | 41.38 | 41.08 | 26.03 | 1.23 | 5.94 | 104.95 | 0.394 | 0.230 | 0.160 | 0.086 | 0.885 |
| 2000 |    | 41.35 | 41.04 | 26.45 | 1.24 | 5.90 | 106.43 | 0.397 | 0.229 | 0.160 | 0.080 | 1.156 |
| 0    | 22 | 40.23 | 39.88 | 22.48 | 1.51 | 7.67 | 107.91 | 0.499 | 0.306 | 0.191 | 0.095 | 0.343 |
| 250  |    | 40.22 | 39.87 | 23.17 | 1.46 | 7.26 | 107.35 | 0.481 | 0.290 | 0.184 | 0.073 | 0.209 |
| 500  |    | 40.15 | 39.82 | 22.98 | 1.45 | 7.37 | 108.95 | 0.479 | 0.295 | 0.189 | 0.069 | 0.255 |
| 1000 |    | 40.11 | 39.78 | 23.14 | 1.42 | 7.26 | 109.37 | 0.470 | 0.290 | 0.188 | 0.077 | 0.260 |
| 2000 |    | 40.07 | 39.74 | 23.45 | 1.43 | 7.21 | 111.09 | 0.473 | 0.289 | 0.188 | 0.076 | 0.272 |
| 0    | 23 | 40.54 | 40.18 | 23.59 | 1.45 | 6.81 | 106.37 | 0.478 | 0.270 | 0.179 | 0.122 | 0.956 |
| 250  |    | 40.55 | 40.19 | 24.41 | 1.42 | 6.45 | 106.32 | 0.465 | 0.255 | 0.173 | 0.091 | 0.613 |
| 500  |    | 40.48 | 40.13 | 24.17 | 1.40 | 6.52 | 106.92 | 0.460 | 0.258 | 0.176 | 0.081 | 0.648 |
| 1000 |    | 40.44 | 40.10 | 24.35 | 1.36 | 6.40 | 106.82 | 0.448 | 0.254 | 0.175 | 0.090 | 0.734 |
| 2000 |    | 40.40 | 40.06 | 24.77 | 1.37 | 6.35 | 109.08 | 0.451 | 0.252 | 0.175 | 0.087 | 0.854 |
| 0    | 24 | 40.67 | 40.37 | 24.33 | 1.32 | 6.62 | 102.82 | 0.430 | 0.261 | 0.168 | 0.077 | 0.340 |
| 250  |    | 40.65 | 40.36 | 25.02 | 1.25 | 6.26 | 101.69 | 0.409 | 0.247 | 0.162 | 0.059 | 0.194 |
| 500  |    | 40.59 | 40.31 | 24.76 | 1.24 | 6.36 | 102.56 | 0.406 | 0.251 | 0.165 | 0.052 | 0.216 |
| 1000 |    | 40.55 | 40.28 | 24.93 | 1.21 | 6.26 | 102.52 | 0.397 | 0.247 | 0.164 | 0.060 | 0.236 |
| 2000 |    | 40.52 | 40.24 | 25.27 | 1.22 | 6.22 | 103.83 | 0.400 | 0.246 | 0.164 | 0.052 | 0.214 |
| 0    | 25 | 41.77 | 41.49 | 25.17 | 1.31 | 6.71 | 114.99 | 0.417 | 0.257 | 0.182 | 0.104 | 1.060 |
| 250  |    | 41.75 | 41.47 | 25.82 | 1.26 | 6.43 | 115.04 | 0.401 | 0.247 | 0.177 | 0.066 | 0.259 |
| 500  |    | 41.70 | 41.43 | 25.51 | 1.26 | 6.49 | 115.04 | 0.400 | 0.249 | 0.179 | 0.065 | 0.238 |
| 1000 |    | 41.67 | 41.41 | 25.79 | 1.23 | 6.39 | 115.23 | 0.391 | 0.246 | 0.178 | 0.070 | 0.278 |
| 2000 |    | 41.66 | 41.39 | 26.16 | 1.24 | 6.33 | 116.50 | 0.395 | 0.243 | 0.177 | 0.067 | 0.270 |

|      |    |       |       |       |      |      |        |       |       |       |       |       |
|------|----|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 36 | 41.73 | 41.43 | 23.87 | 1.40 | 7.13 | 107.55 | 0.410 | 0.254 | 0.177 | 0.077 | 0.240 |
| 250  |    | 41.70 | 41.40 | 24.03 | 1.39 | 6.77 | 107.13 | 0.411 | 0.263 | 0.173 | 0.063 | 0.171 |
| 500  |    | 41.64 | 41.35 | 24.34 | 1.31 | 6.84 | 107.01 | 0.418 | 0.263 | 0.175 | 0.060 | 0.157 |
| 1000 |    | 41.61 | 41.32 | 24.62 | 1.28 | 6.72 | 107.38 | 0.409 | 0.259 | 0.174 | 0.069 | 0.183 |
| 2000 |    | 41.59 | 41.29 | 24.96 | 1.30 | 6.62 | 108.10 | 0.414 | 0.255 | 0.172 | 0.060 | 0.144 |
| 0    | 27 | 40.19 | 39.82 | 23.13 | 1.50 | 7.03 | 97.55  | 0.494 | 0.281 | 0.171 | 0.149 | 0.440 |
| 250  |    | 40.16 | 39.81 | 23.80 | 1.42 | 6.80 | 97.60  | 0.466 | 0.267 | 0.167 | 0.083 | 0.301 |
| 500  |    | 40.10 | 39.75 | 23.50 | 1.41 | 6.72 | 97.18  | 0.465 | 0.269 | 0.168 | 0.075 | 0.270 |
| 1000 |    | 40.06 | 39.72 | 23.72 | 1.37 | 6.59 | 98.99  | 0.453 | 0.264 | 0.166 | 0.079 | 0.301 |
| 2000 |    | 40.05 | 39.70 | 23.98 | 1.39 | 6.50 | 99.00  | 0.459 | 0.261 | 0.164 | 0.078 | 0.268 |
| 0    | 28 | 41.40 | 41.11 | 25.31 | 1.26 | 6.23 | 105.74 | 0.403 | 0.241 | 0.166 | 0.082 | 0.246 |
| 250  |    | 41.36 | 41.09 | 26.01 | 1.18 | 5.92 | 105.49 | 0.379 | 0.239 | 0.161 | 0.056 | 0.200 |
| 500  |    | 41.31 | 41.05 | 25.81 | 1.18 | 5.98 | 106.08 | 0.378 | 0.232 | 0.164 | 0.055 | 0.187 |
| 1000 |    | 41.28 | 41.02 | 26.12 | 1.15 | 5.87 | 106.32 | 0.368 | 0.236 | 0.162 | 0.076 | 0.226 |
| 2000 |    | 41.26 | 40.99 | 26.58 | 1.16 | 5.78 | 107.30 | 0.372 | 0.224 | 0.161 | 0.057 | 0.198 |
| 0    | 29 | 42.68 | 42.36 | 24.76 | 1.40 | 7.11 | 114.19 | 0.437 | 0.267 | 0.184 | 0.095 | 0.280 |
| 250  |    | 42.65 | 42.36 | 25.51 | 1.31 | 6.73 | 113.60 | 0.407 | 0.253 | 0.177 | 0.065 | 0.206 |
| 500  |    | 42.60 | 42.32 | 25.37 | 1.30 | 6.77 | 114.58 | 0.404 | 0.255 | 0.180 | 0.063 | 0.188 |
| 1000 |    | 42.57 | 42.29 | 25.61 | 1.26 | 6.66 | 114.34 | 0.393 | 0.251 | 0.178 | 0.068 | 0.227 |
| 2000 |    | 42.56 | 42.28 | 26.02 | 1.26 | 6.56 | 115.33 | 0.394 | 0.247 | 0.176 | 0.064 | 0.204 |
| 0    | 30 | 41.72 | 41.30 | 23.27 | 1.62 | 7.76 | 105.29 | 0.514 | 0.299 | 0.180 | 0.106 | 0.268 |
| 250  |    | 41.68 | 41.30 | 23.96 | 1.50 | 7.34 | 104.86 | 0.478 | 0.283 | 0.174 | 0.069 | 0.198 |
| 500  |    | 41.62 | 41.25 | 23.76 | 1.49 | 7.40 | 105.23 | 0.475 | 0.285 | 0.176 | 0.063 | 0.183 |
| 1000 |    | 41.58 | 41.21 | 23.97 | 1.45 | 7.27 | 105.30 | 0.463 | 0.281 | 0.175 | 0.066 | 0.218 |
| 2000 |    | 41.56 | 41.18 | 24.37 | 1.46 | 7.19 | 106.75 | 0.467 | 0.278 | 0.174 | 0.063 | 0.174 |
| 0    | 31 | 41.27 | 40.98 | 24.45 | 1.29 | 6.60 | 106.67 | 0.413 | 0.256 | 0.174 | 0.085 | 0.375 |
| 250  |    | 41.23 | 40.96 | 25.18 | 1.22 | 6.32 | 107.56 | 0.393 | 0.246 | 0.170 | 0.062 | 0.300 |
| 500  |    | 41.18 | 40.91 | 24.81 | 1.22 | 6.41 | 107.19 | 0.393 | 0.249 | 0.172 | 0.170 | 0.519 |
| 1000 |    | 41.14 | 40.88 | 24.94 | 1.19 | 6.31 | 106.73 | 0.385 | 0.246 | 0.170 | 0.075 | 0.332 |
| 2000 |    | 41.12 | 40.85 | 25.28 | 1.21 | 6.25 | 107.77 | 0.389 | 0.244 | 0.170 | 0.195 | 0.634 |
| 0    | 32 | 40.08 | 39.78 | 22.19 | 1.30 | 7.45 | 98.01  | 0.456 | 0.298 | 0.176 | 0.095 | 0.235 |
| 250  |    | 40.05 | 39.77 | 22.79 | 1.29 | 7.07 | 97.64  | 0.427 | 0.283 | 0.170 | 0.056 | 0.164 |
| 500  |    | 40.00 | 39.73 | 22.48 | 1.28 | 7.14 | 97.10  | 0.426 | 0.286 | 0.172 | 0.054 | 0.147 |
| 1000 |    | 39.97 | 39.70 | 22.62 | 1.26 | 7.03 | 96.86  | 0.417 | 0.282 | 0.170 | 0.065 | 0.179 |
| 2000 |    | 39.95 | 39.67 | 22.83 | 1.27 | 6.96 | 97.05  | 0.420 | 0.279 | 0.169 | 0.054 | 0.142 |
| 0    | 33 | 39.98 | 39.65 | 22.33 | 1.44 | 7.41 | 99.99  | 0.476 | 0.297 | 0.178 | 0.097 | 0.244 |
| 250  |    | 39.94 | 39.63 | 23.01 | 1.34 | 7.01 | 99.62  | 0.447 | 0.282 | 0.172 | 0.059 | 0.171 |
| 500  |    | 39.88 | 39.58 | 22.71 | 1.34 | 7.10 | 99.37  | 0.446 | 0.286 | 0.174 | 0.055 | 0.157 |
| 1000 |    | 39.84 | 39.54 | 22.82 | 1.32 | 6.99 | 98.70  | 0.438 | 0.281 | 0.172 | 0.062 | 0.191 |
| 2000 |    | 39.81 | 39.50 | 23.11 | 1.33 | 6.94 | 99.43  | 0.443 | 0.280 | 0.171 | 0.055 | 0.156 |
| 0    | 34 | 41.55 | 41.26 | 24.45 | 1.32 | 6.59 | 107.39 | 0.421 | 0.254 | 0.175 | 0.105 | 0.347 |
| 250  |    | 41.52 | 41.24 | 25.32 | 1.24 | 6.23 | 107.88 | 0.396 | 0.240 | 0.170 | 0.062 | 0.238 |
| 500  |    | 41.46 | 41.19 | 25.00 | 1.23 | 6.30 | 108.08 | 0.393 | 0.243 | 0.172 | 0.058 | 0.208 |
| 1000 |    | 41.42 | 41.15 | 25.18 | 1.20 | 6.20 | 108.05 | 0.384 | 0.240 | 0.171 | 0.068 | 0.243 |
| 2000 |    | 41.39 | 41.12 | 25.51 | 1.21 | 6.15 | 109.45 | 0.388 | 0.238 | 0.171 | 0.057 | 0.212 |

|      |       |       |       |      |      |        |       |       |       |       |        |
|------|-------|-------|-------|------|------|--------|-------|-------|-------|-------|--------|
| 0    | 42.44 | 42.08 | 24.57 | 1.31 | 7.03 | 103.20 | 0.441 | 0.236 | 0.167 | 0.131 | 0.810  |
| 250  | 42.43 | 42.09 | 25.41 | 1.36 | 6.65 | 102.95 | 0.426 | 0.251 | 0.161 | 0.081 | 0.540  |
| 500  | 42.37 | 42.03 | 25.12 | 1.35 | 6.71 | 102.90 | 0.422 | 0.254 | 0.162 | 0.072 | 0.455  |
| 1000 | 42.33 | 42.00 | 25.34 | 1.31 | 6.57 | 102.37 | 0.410 | 0.249 | 0.161 | 0.073 | 0.490  |
| 2000 | 42.30 | 41.97 | 25.64 | 1.32 | 6.51 | 102.98 | 0.413 | 0.247 | 0.160 | 0.071 | 0.568  |
| 0    | 42.35 | 42.01 | 23.53 | 1.43 | 7.63 | 101.90 | 0.449 | 0.289 | 0.172 | 0.098 | 0.244  |
| 250  | 42.32 | 41.99 | 24.32 | 1.35 | 7.21 | 102.29 | 0.435 | 0.273 | 0.167 | 0.059 | 0.182  |
| 500  | 42.25 | 41.94 | 23.97 | 1.35 | 7.31 | 102.30 | 0.434 | 0.277 | 0.170 | 0.056 | 0.170  |
| 1000 | 42.22 | 41.91 | 24.18 | 1.32 | 7.18 | 102.54 | 0.415 | 0.273 | 0.169 | 0.063 | 0.196  |
| 2000 | 42.19 | 41.87 | 24.39 | 1.33 | 7.13 | 103.17 | 0.418 | 0.271 | 0.168 | 0.053 | 0.156  |
| 0    | 42.72 | 42.39 | 25.96 | 1.31 | 6.30 | 101.34 | 0.408 | 0.237 | 0.155 | 0.109 | 0.487  |
| 250  | 42.71 | 42.38 | 26.76 | 1.28 | 5.96 | 100.43 | 0.396 | 0.224 | 0.149 | 0.070 | 0.337  |
| 500  | 42.64 | 42.31 | 26.48 | 1.27 | 6.02 | 100.34 | 0.395 | 0.226 | 0.151 | 0.067 | 0.298  |
| 1000 | 42.60 | 42.28 | 26.69 | 1.24 | 5.89 | 99.47  | 0.385 | 0.222 | 0.148 | 0.073 | 0.341  |
| 2000 | 42.56 | 42.23 | 27.00 | 1.25 | 5.84 | 99.66  | 0.390 | 0.220 | 0.147 | 0.068 | 0.340  |
| 0    | 44.88 | 44.51 | 25.66 | 1.43 | 7.05 | 105.27 | 0.423 | 0.252 | 0.163 | 0.088 | 0.284  |
| 250  | 44.86 | 44.51 | 26.66 | 1.35 | 6.63 | 106.35 | 0.400 | 0.239 | 0.159 | 0.062 | 0.202  |
| 500  | 44.79 | 44.45 | 26.29 | 1.34 | 6.73 | 105.88 | 0.396 | 0.241 | 0.160 | 0.060 | 0.197  |
| 1000 | 44.75 | 44.43 | 26.71 | 1.30 | 6.58 | 106.47 | 0.385 | 0.236 | 0.159 | 0.072 | 0.241  |
| 2000 | 44.72 | 44.39 | 27.14 | 1.30 | 6.48 | 107.33 | 0.386 | 0.232 | 0.157 | 0.062 | 0.214  |
| 0    | 45.90 | 45.44 | 28.55 | 1.27 | 6.03 | 104.45 | 0.368 | 0.211 | 0.146 | 0.214 | 2.410  |
| 250  | 45.83 | 45.47 | 29.57 | 1.27 | 5.77 | 105.27 | 0.367 | 0.202 | 0.142 | 0.155 | 2.020  |
| 500  | 45.76 | 45.41 | 29.19 | 1.26 | 5.81 | 105.11 | 0.364 | 0.203 | 0.143 | 0.153 | 1.725  |
| 1000 | 45.73 | 45.39 | 29.58 | 1.22 | 5.68 | 105.43 | 0.354 | 0.199 | 0.142 | 0.171 | 2.000  |
| 2000 | 45.70 | 45.35 | 30.03 | 1.22 | 5.59 | 106.30 | 0.355 | 0.196 | 0.141 | 0.166 | 2.240  |
| 0    | 42.54 | 42.12 | 24.03 | 1.57 | 7.64 | 106.82 | 0.490 | 0.289 | 0.177 | 0.095 | 0.470  |
| 250  | 42.52 | 42.12 | 24.87 | 1.51 | 7.28 | 107.10 | 0.471 | 0.275 | 0.171 | 0.066 | 0.331  |
| 500  | 42.45 | 42.05 | 24.52 | 1.50 | 7.37 | 106.97 | 0.470 | 0.279 | 0.174 | 0.064 | 0.321  |
| 1000 | 42.41 | 42.02 | 24.76 | 1.47 | 7.23 | 106.36 | 0.460 | 0.274 | 0.171 | 0.079 | 0.381  |
| 2000 | 42.37 | 41.97 | 25.11 | 1.48 | 7.15 | 107.03 | 0.463 | 0.271 | 0.170 | 0.068 | 0.420  |
| 0    | 43.37 | 42.95 | 25.30 | 1.51 | 6.88 | 102.89 | 0.462 | 0.255 | 0.162 | 0.099 | 0.428  |
| 250  | 43.37 | 42.96 | 26.18 | 1.45 | 6.53 | 103.12 | 0.442 | 0.242 | 0.157 | 0.068 | 0.290  |
| 500  | 43.29 | 42.89 | 25.85 | 1.43 | 6.60 | 103.00 | 0.439 | 0.245 | 0.159 | 0.065 | 0.281  |
| 1000 | 43.25 | 42.86 | 26.12 | 1.40 | 6.47 | 102.59 | 0.429 | 0.240 | 0.156 | 0.071 | 0.334  |
| 2000 | 43.21 | 42.81 | 26.49 | 1.41 | 6.42 | 103.68 | 0.433 | 0.239 | 0.156 | 0.066 | 0.322  |
| 0    | 43.26 | 42.93 | 27.68 | 1.24 | 5.82 | 103.52 | 0.381 | 0.216 | 0.149 | 0.389 | 11.080 |
| 250  | 43.20 | 42.95 | 28.61 | 1.24 | 5.56 | 103.78 | 0.380 | 0.206 | 0.144 | 0.237 | 9.600  |
| 500  | 43.22 | 42.89 | 28.16 | 1.24 | 5.60 | 103.19 | 0.380 | 0.208 | 0.146 | 0.241 | 8.220  |
| 1000 | 43.19 | 42.87 | 28.53 | 1.20 | 5.49 | 103.31 | 0.369 | 0.204 | 0.144 | 0.283 | 9.330  |
| 2000 | 43.16 | 42.83 | 28.93 | 1.20 | 5.40 | 103.92 | 0.370 | 0.201 | 0.143 | 0.334 | 13.860 |
| 0    | 44.17 | 43.75 | 26.21 | 1.60 | 7.43 | 126.58 | 0.482 | 0.270 | 0.192 | 0.072 | 0.187  |
| 250  | 44.17 | 43.77 | 27.00 | 1.51 | 7.15 | 127.28 | 0.452 | 0.260 | 0.188 | 0.051 | 0.143  |
| 500  | 44.09 | 43.71 | 26.53 | 1.49 | 7.22 | 126.59 | 0.450 | 0.263 | 0.190 | 0.057 | 0.166  |
| 1000 | 44.07 | 43.70 | 26.74 | 1.46 | 7.11 | 126.33 | 0.440 | 0.259 | 0.188 | 0.067 | 0.217  |
| 2000 | 44.03 | 43.66 | 27.09 | 1.46 | 7.01 | 126.93 | 0.440 | 0.256 | 0.186 | 0.059 | 0.188  |



|      |    |       |       |       |      |      |        |       |       |       |       |       |
|------|----|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 41 | 42.40 | 42.45 | 26.60 | 1.30 | 6.00 | 105.50 | 0.415 | 0.240 | 0.159 | 0.079 | 0.206 |
| 250  |    | 42.46 | 42.45 | 27.49 | 1.25 | 5.75 | 105.60 | 0.365 | 0.217 | 0.153 | 0.048 | 0.131 |
| 500  |    | 42.40 | 42.10 | 27.20 | 1.22 | 5.80 | 106.14 | 0.381 | 0.219 | 0.155 | 0.051 | 0.141 |
| 1000 |    | 42.37 | 42.08 | 27.54 | 1.18 | 5.66 | 105.80 | 0.370 | 0.214 | 0.153 | 0.060 | 0.175 |
| 2000 |    | 42.34 | 42.04 | 26.97 | 1.18 | 5.57 | 107.03 | 0.371 | 0.211 | 0.152 | 0.056 | 0.148 |
| 0    | 45 | 44.50 | 44.21 | 27.10 | 1.36 | 6.21 | 101.82 | 0.404 | 0.222 | 0.149 | 0.083 | 0.226 |
| 250  |    | 44.55 | 44.20 | 28.27 | 1.27 | 5.89 | 103.00 | 0.377 | 0.212 | 0.145 | 0.050 | 0.149 |
| 500  |    | 44.47 | 44.14 | 27.90 | 1.25 | 5.94 | 102.65 | 0.374 | 0.214 | 0.146 | 0.055 | 0.165 |
| 1000 |    | 44.44 | 44.11 | 28.24 | 1.22 | 5.82 | 102.53 | 0.364 | 0.210 | 0.144 | 0.064 | 0.204 |
| 2000 |    | 44.40 | 44.07 | 28.67 | 1.23 | 5.75 | 103.00 | 0.367 | 0.208 | 0.143 | 0.057 | 0.178 |
| 0    | 46 | 44.81 | 44.49 | 28.25 | 1.26 | 6.11 | 109.72 | 0.374 | 0.219 | 0.155 | 0.083 | 0.341 |
| 250  |    | 44.80 | 44.49 | 29.22 | 1.21 | 5.82 | 110.65 | 0.359 | 0.208 | 0.151 | 0.048 | 0.230 |
| 500  |    | 44.73 | 44.44 | 28.81 | 1.20 | 5.87 | 110.49 | 0.356 | 0.210 | 0.153 | 0.052 | 0.219 |
| 1000 |    | 44.70 | 44.41 | 29.18 | 1.17 | 5.74 | 110.74 | 0.346 | 0.206 | 0.151 | 0.058 | 0.261 |
| 2000 |    | 44.67 | 44.38 | 29.75 | 1.17 | 5.66 | 112.61 | 0.348 | 0.203 | 0.151 | 0.056 | 0.264 |
| 0    | 47 | 43.48 | 43.13 | 25.27 | 1.45 | 7.40 | 121.88 | 0.443 | 0.273 | 0.192 | 0.101 | 1.331 |
| 250  |    | 43.51 | 43.15 | 25.97 | 1.44 | 7.08 | 121.27 | 0.440 | 0.261 | 0.186 | 0.062 | 1.082 |
| 500  |    | 43.44 | 43.09 | 25.60 | 1.43 | 7.18 | 121.65 | 0.438 | 0.265 | 0.189 | 0.067 | 0.982 |
| 1000 |    | 43.41 | 42.06 | 25.94 | 1.40 | 7.03 | 121.96 | 0.428 | 0.260 | 0.187 | 0.083 | 1.063 |
| 2000 |    | 43.37 | 43.02 | 26.47 | 1.40 | 6.95 | 124.29 | 0.429 | 0.257 | 0.187 | 0.080 | 1.468 |
| 0    | 48 | 42.01 | 41.65 | 26.15 | 1.37 | 6.47 | 114.69 | 0.431 | 0.247 | 0.175 | 0.144 | 2.110 |
| 250  |    | 42.03 | 41.66 | 27.10 | 1.38 | 6.19 | 115.32 | 0.435 | 0.236 | 0.169 | 0.085 | 1.884 |
| 500  |    | 41.95 | 41.59 | 26.69 | 1.37 | 6.24 | 114.79 | 0.433 | 0.239 | 0.171 | 0.087 | 1.661 |
| 1000 |    | 41.91 | 41.56 | 27.03 | 1.33 | 6.11 | 114.64 | 0.422 | 0.234 | 0.169 | 0.099 | 1.837 |
| 2000 |    | 41.07 | 41.51 | 27.56 | 1.34 | 6.05 | 116.49 | 0.425 | 0.232 | 0.168 | 0.105 | 2.666 |
| 0    | 49 | 42.71 | 42.45 | 26.93 | 1.15 | 6.02 | 106.29 | 0.356 | 0.226 | 0.157 | 0.060 | 0.431 |
| 250  |    | 42.73 | 42.46 | 27.77 | 1.14 | 5.75 | 106.07 | 0.354 | 0.216 | 0.152 | 0.088 | 1.207 |
| 500  |    | 42.69 | 42.43 | 27.55 | 1.13 | 5.75 | 105.50 | 0.351 | 0.216 | 0.152 | 0.070 | 0.411 |
| 1000 |    | 42.65 | 42.40 | 27.74 | 1.09 | 5.62 | 104.23 | 0.339 | 0.211 | 0.149 | 0.077 | 0.431 |
| 2000 |    | 42.63 | 42.38 | 28.34 | 1.09 | 5.52 | 104.99 | 0.339 | 0.207 | 0.147 | 0.071 | 0.410 |
| 0    | 50 | 43.28 | 42.93 | 28.12 | 1.26 | 5.62 | 102.09 | 0.387 | 0.208 | 0.144 | 0.066 | 0.534 |
| 250  |    | 43.31 | 42.95 | 28.92 | 1.27 | 5.40 | 102.18 | 0.389 | 0.200 | 0.141 | 0.094 | 0.478 |
| 500  |    | 43.25 | 42.90 | 28.57 | 1.25 | 5.41 | 101.58 | 0.384 | 0.201 | 0.141 | 0.079 | 0.531 |
| 1000 |    | 43.20 | 42.87 | 28.90 | 1.21 | 5.31 | 101.89 | 0.372 | 0.197 | 0.140 | 0.095 | 0.643 |
| 2000 |    | 43.18 | 42.84 | 29.50 | 1.22 | 5.20 | 102.83 | 0.374 | 0.193 | 0.139 | 0.086 | 0.652 |
| 0    | 51 | 42.19 | 41.87 | 25.72 | 1.33 | 6.72 | 117.97 | 0.420 | 0.256 | 0.182 | 0.039 | 0.153 |
| 250  |    | 42.20 | 41.88 | 26.65 | 1.34 | 6.48 | 119.37 | 0.421 | 0.246 | 0.178 | 0.076 | 0.182 |
| 500  |    | 42.14 | 41.82 | 26.16 | 1.33 | 6.52 | 118.25 | 0.418 | 0.248 | 0.180 | 0.065 | 0.226 |
| 1000 |    | 42.10 | 41.78 | 26.44 | 1.30 | 6.41 | 118.49 | 0.409 | 0.244 | 0.178 | 0.077 | 0.260 |
| 2000 |    | 42.07 | 41.75 | 26.97 | 1.31 | 6.33 | 120.21 | 0.412 | 0.241 | 0.177 | 0.066 | 0.224 |
| 0    | 52 | 43.00 | 43.49 | 27.87 | 1.22 | 5.91 | 108.76 | 0.369 | 0.216 | 0.155 | 0.065 | 0.605 |
| 250  |    | 43.62 | 43.50 | 28.94 | 1.23 | 5.66 | 109.85 | 0.371 | 0.207 | 0.151 | 0.090 | 0.467 |
| 500  |    | 43.75 | 43.45 | 28.55 | 1.21 | 5.68 | 109.39 | 0.366 | 0.208 | 0.152 | 0.075 | 0.501 |
| 1000 |    | 43.71 | 43.41 | 28.92 | 1.17 | 5.56 | 109.48 | 0.356 | 0.204 | 0.151 | 0.086 | 0.558 |
| 2000 |    | 43.68 | 43.38 | 29.53 | 1.17 | 5.47 | 110.96 | 0.356 | 0.201 | 0.150 | 0.078 | 0.590 |

|      |    |       |       |       |      |      |        |       |       |       |       |        |
|------|----|-------|-------|-------|------|------|--------|-------|-------|-------|-------|--------|
| 0    | 53 | 45.57 | 45.57 | 25.57 | 1.33 | 7.33 | 103.83 | 0.41  | 0.27  | 0.164 | 0.845 | 0.172  |
| 250  |    | 45.54 | 45.54 | 26.54 | 1.33 | 6.33 | 103.83 | 0.41  | 0.27  | 0.164 | 0.845 | 0.172  |
| 500  |    | 45.51 | 45.51 | 27.51 | 1.33 | 5.33 | 103.83 | 0.41  | 0.27  | 0.164 | 0.845 | 0.172  |
| 1000 |    | 45.48 | 45.48 | 28.48 | 1.33 | 4.33 | 103.83 | 0.41  | 0.27  | 0.164 | 0.845 | 0.172  |
| 2000 |    | 45.45 | 45.45 | 29.45 | 1.33 | 3.33 | 103.83 | 0.41  | 0.27  | 0.164 | 0.845 | 0.172  |
| 0    | 54 | 43.34 | 43.34 | 27.34 | 1.29 | 6.13 | 103.73 | 0.376 | 0.225 | 0.157 | 0.853 | 0.374  |
| 250  |    | 43.31 | 43.31 | 28.31 | 1.29 | 5.13 | 103.73 | 0.376 | 0.225 | 0.157 | 0.853 | 0.374  |
| 500  |    | 43.28 | 43.28 | 29.28 | 1.29 | 4.13 | 103.73 | 0.376 | 0.225 | 0.157 | 0.853 | 0.374  |
| 1000 |    | 43.25 | 43.25 | 30.25 | 1.29 | 3.13 | 103.73 | 0.376 | 0.225 | 0.157 | 0.853 | 0.374  |
| 2000 |    | 43.22 | 43.22 | 31.22 | 1.29 | 2.13 | 103.73 | 0.376 | 0.225 | 0.157 | 0.853 | 0.374  |
| 0    | 55 | 44.61 | 44.61 | 24.78 | 1.54 | 7.63 | 103.12 | 0.458 | 0.275 | 0.166 | 0.864 | 0.676  |
| 250  |    | 44.58 | 44.58 | 25.75 | 1.54 | 6.63 | 103.12 | 0.458 | 0.275 | 0.166 | 0.864 | 0.676  |
| 500  |    | 44.55 | 44.55 | 26.72 | 1.54 | 5.63 | 103.12 | 0.458 | 0.275 | 0.166 | 0.864 | 0.676  |
| 1000 |    | 44.52 | 44.52 | 27.69 | 1.54 | 4.63 | 103.12 | 0.458 | 0.275 | 0.166 | 0.864 | 0.676  |
| 2000 |    | 44.49 | 44.49 | 28.66 | 1.54 | 3.63 | 103.12 | 0.458 | 0.275 | 0.166 | 0.864 | 0.676  |
| 0    | 56 | 45.34 | 44.97 | 28.34 | 1.32 | 6.09 | 105.87 | 0.387 | 0.216 | 0.149 | 0.874 | 0.913  |
| 250  |    | 45.31 | 44.94 | 29.31 | 1.32 | 5.09 | 105.87 | 0.387 | 0.216 | 0.149 | 0.874 | 0.913  |
| 500  |    | 45.28 | 44.91 | 30.28 | 1.32 | 4.09 | 105.87 | 0.387 | 0.216 | 0.149 | 0.874 | 0.913  |
| 1000 |    | 45.25 | 44.88 | 31.25 | 1.32 | 3.09 | 105.87 | 0.387 | 0.216 | 0.149 | 0.874 | 0.913  |
| 2000 |    | 45.22 | 44.85 | 32.22 | 1.32 | 2.09 | 105.87 | 0.387 | 0.216 | 0.149 | 0.874 | 0.913  |
| 0    | 57 | 42.69 | 42.40 | 26.55 | 1.26 | 6.54 | 118.63 | 0.393 | 0.246 | 0.178 | 0.858 | 0.103  |
| 250  |    | 42.66 | 42.37 | 27.52 | 1.26 | 5.54 | 118.63 | 0.393 | 0.246 | 0.178 | 0.858 | 0.103  |
| 500  |    | 42.63 | 42.34 | 28.49 | 1.26 | 4.54 | 118.63 | 0.393 | 0.246 | 0.178 | 0.858 | 0.103  |
| 1000 |    | 42.60 | 42.31 | 29.46 | 1.26 | 3.54 | 118.63 | 0.393 | 0.246 | 0.178 | 0.858 | 0.103  |
| 2000 |    | 42.57 | 42.28 | 30.43 | 1.26 | 2.54 | 118.63 | 0.393 | 0.246 | 0.178 | 0.858 | 0.103  |
| 0    | 58 | 42.79 | 42.36 | 23.51 | 1.58 | 7.90 | 107.99 | 0.491 | 0.297 | 0.183 | 0.858 | 0.539  |
| 250  |    | 42.76 | 42.33 | 24.48 | 1.58 | 6.90 | 107.99 | 0.491 | 0.297 | 0.183 | 0.858 | 0.539  |
| 500  |    | 42.73 | 42.30 | 25.45 | 1.58 | 5.90 | 107.99 | 0.491 | 0.297 | 0.183 | 0.858 | 0.539  |
| 1000 |    | 42.70 | 42.27 | 26.42 | 1.58 | 4.90 | 107.99 | 0.491 | 0.297 | 0.183 | 0.858 | 0.539  |
| 2000 |    | 42.67 | 42.24 | 27.39 | 1.58 | 3.90 | 107.99 | 0.491 | 0.297 | 0.183 | 0.858 | 0.539  |
| 0    | 59 | 42.74 | 42.48 | 26.82 | 1.14 | 5.88 | 103.46 | 0.354 | 0.221 | 0.153 | 0.837 | 0.124  |
| 250  |    | 42.71 | 42.45 | 27.79 | 1.14 | 4.88 | 103.46 | 0.354 | 0.221 | 0.153 | 0.837 | 0.124  |
| 500  |    | 42.68 | 42.42 | 28.76 | 1.14 | 3.88 | 103.46 | 0.354 | 0.221 | 0.153 | 0.837 | 0.124  |
| 1000 |    | 42.65 | 42.39 | 29.73 | 1.14 | 2.88 | 103.46 | 0.354 | 0.221 | 0.153 | 0.837 | 0.124  |
| 2000 |    | 42.62 | 42.36 | 30.70 | 1.14 | 1.88 | 103.46 | 0.354 | 0.221 | 0.153 | 0.837 | 0.124  |
| 0    | 60 | 44.96 | 44.58 | 28.05 | 1.35 | 6.29 | 109.57 | 0.399 | 0.225 | 0.155 | 0.884 | 0.994  |
| 250  |    | 44.93 | 44.55 | 29.02 | 1.35 | 5.29 | 109.57 | 0.399 | 0.225 | 0.155 | 0.884 | 0.994  |
| 500  |    | 44.90 | 44.52 | 29.99 | 1.35 | 4.29 | 109.57 | 0.399 | 0.225 | 0.155 | 0.884 | 0.994  |
| 1000 |    | 44.87 | 44.49 | 30.96 | 1.35 | 3.29 | 109.57 | 0.399 | 0.225 | 0.155 | 0.884 | 0.994  |
| 2000 |    | 44.84 | 44.46 | 31.93 | 1.35 | 2.29 | 109.57 | 0.399 | 0.225 | 0.155 | 0.884 | 0.994  |
| 0    | 61 | 42.99 | 42.64 | 25.84 | 1.36 | 6.69 | 107.93 | 0.420 | 0.250 | 0.166 | 0.446 | 13.030 |
| 250  |    | 42.96 | 42.61 | 26.81 | 1.36 | 5.69 | 107.93 | 0.420 | 0.250 | 0.166 | 0.446 | 13.030 |
| 500  |    | 42.93 | 42.58 | 27.78 | 1.36 | 4.69 | 107.93 | 0.420 | 0.250 | 0.166 | 0.446 | 13.030 |
| 1000 |    | 42.90 | 42.55 | 28.75 | 1.36 | 3.69 | 107.93 | 0.420 | 0.250 | 0.166 | 0.446 | 13.030 |
| 2000 |    | 42.87 | 42.52 | 29.72 | 1.36 | 2.69 | 107.93 | 0.420 | 0.250 | 0.166 | 0.446 | 13.030 |

|      |       |       |       |      |      |        |       |       |       |       |       |
|------|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 43.50 | 44.25 | 28.01 | 1.71 | 6.07 | 102.90 | 0.351 | 9.215 | 0.146 | 0.211 | 6.260 |
| 250  | 44.03 | 44.31 | 28.90 | 1.74 | 5.79 | 101.83 | 0.352 | 9.205 | 0.142 | 0.186 | 4.980 |
| 500  | 44.57 | 44.26 | 28.46 | 1.80 | 5.73 | 102.46 | 0.358 | 0.206 | 0.143 | 0.187 | 5.110 |
| 1000 | 44.55 | 44.24 | 28.02 | 1.17 | 5.60 | 102.40 | 0.347 | 0.202 | 0.141 | 0.207 | 5.580 |
| 2000 | 44.52 | 44.22 | 29.44 | 1.16 | 5.50 | 103.08 | 0.347 | 0.198 | 0.140 | 0.230 | 6.960 |
| 0    | 43.23 | 42.89 | 26.02 | 1.30 | 6.41 | 104.12 | 0.406 | 0.238 | 0.159 | 0.042 | 0.190 |
| 250  | 43.27 | 42.91 | 26.86 | 1.33 | 6.15 | 104.48 | 0.400 | 0.228 | 0.155 | 0.061 | 0.124 |
| 500  | 43.70 | 42.05 | 26.53 | 1.35 | 6.29 | 104.53 | 0.405 | 0.231 | 0.157 | 0.062 | 0.270 |
| 1000 | 43.16 | 42.82 | 26.04 | 1.29 | 6.10 | 104.49 | 0.397 | 0.227 | 0.155 | 0.073 | 0.309 |
| 2000 | 43.13 | 42.78 | 27.33 | 1.29 | 6.02 | 105.42 | 0.398 | 0.224 | 0.154 | 0.063 | 0.294 |
| 0    | 44.73 | 43.07 | 27.52 | 1.30 | 6.04 | 101.01 | 0.389 | 0.219 | 0.146 | 0.059 | 0.423 |
| 250  | 44.25 | 43.08 | 28.45 | 1.32 | 5.78 | 101.24 | 0.395 | 0.210 | 0.142 | 0.070 | 0.387 |
| 500  | 44.17 | 43.01 | 27.97 | 1.29 | 5.80 | 100.55 | 0.387 | 0.211 | 0.143 | 0.066 | 0.401 |
| 1000 | 44.13 | 43.78 | 28.31 | 1.25 | 5.68 | 100.73 | 0.376 | 0.207 | 0.142 | 0.067 | 0.452 |
| 2000 | 44.09 | 43.74 | 28.85 | 1.26 | 5.62 | 102.30 | 0.378 | 0.204 | 0.141 | 0.065 | 0.406 |
| 0    | 42.01 | 42.45 | 25.61 | 1.37 | 6.60 | 103.83 | 0.423 | 0.247 | 0.161 | 0.042 | 0.184 |
| 250  | 42.04 | 42.47 | 26.52 | 1.37 | 6.27 | 103.66 | 0.426 | 0.235 | 0.156 | 0.073 | 0.166 |
| 500  | 42.76 | 42.40 | 26.18 | 1.35 | 6.30 | 103.24 | 0.419 | 0.237 | 0.157 | 0.063 | 0.189 |
| 1000 | 42.72 | 42.37 | 26.40 | 1.31 | 6.16 | 102.87 | 0.406 | 0.231 | 0.155 | 0.063 | 0.216 |
| 2000 | 42.68 | 42.33 | 26.93 | 1.31 | 6.09 | 103.72 | 0.409 | 0.229 | 0.153 | 0.060 | 0.168 |
| 0    | 44.16 | 43.01 | 25.21 | 1.38 | 7.09 | 104.33 | 0.414 | 0.258 | 0.165 | 0.088 | 1.554 |
| 250  | 44.19 | 43.83 | 25.87 | 1.39 | 6.82 | 103.90 | 0.416 | 0.248 | 0.160 | 0.088 | 1.116 |
| 500  | 44.12 | 43.76 | 25.61 | 1.38 | 6.91 | 104.27 | 0.414 | 0.251 | 0.162 | 0.078 | 1.105 |
| 1000 | 44.08 | 43.73 | 25.86 | 1.34 | 6.79 | 103.88 | 0.405 | 0.247 | 0.160 | 0.080 | 1.162 |
| 2000 | 44.05 | 43.67 | 26.32 | 1.35 | 6.73 | 105.23 | 0.406 | 0.245 | 0.159 | 0.084 | 1.410 |
| 0    | 42.66 | 42.30 | 25.02 | 1.36 | 6.53 | 110.35 | 0.424 | 0.246 | 0.170 | 0.033 | 0.092 |
| 250  | 42.70 | 42.34 | 26.73 | 1.37 | 6.25 | 110.75 | 0.425 | 0.235 | 0.165 | 0.062 | 0.145 |
| 500  | 42.62 | 42.28 | 26.43 | 1.35 | 6.29 | 110.67 | 0.420 | 0.237 | 0.167 | 0.058 | 0.185 |
| 1000 | 42.59 | 42.25 | 26.80 | 1.31 | 6.14 | 110.43 | 0.407 | 0.231 | 0.164 | 0.078 | 0.222 |
| 2000 | 42.56 | 42.22 | 27.36 | 1.31 | 6.02 | 111.73 | 0.407 | 0.227 | 0.162 | 0.059 | 0.176 |
| 0    | 43.97 | 43.69 | 28.03 | 1.15 | 5.79 | 106.51 | 0.346 | 0.211 | 0.151 | 0.086 | 1.806 |
| 250  | 43.98 | 43.70 | 29.01 | 1.15 | 5.50 | 106.53 | 0.346 | 0.200 | 0.146 | 0.087 | 1.494 |
| 500  | 43.92 | 43.64 | 28.66 | 1.14 | 5.54 | 106.51 | 0.345 | 0.202 | 0.148 | 0.081 | 1.531 |
| 1000 | 43.88 | 43.61 | 28.98 | 1.11 | 5.42 | 106.21 | 0.334 | 0.198 | 0.146 | 0.086 | 1.655 |
| 2000 | 43.05 | 43.58 | 29.50 | 1.11 | 5.33 | 107.26 | 0.335 | 0.195 | 0.145 | 0.094 | 2.180 |
| 0    | 43.56 | 43.25 | 27.71 | 1.21 | 5.81 | 105.05 | 0.369 | 0.214 | 0.151 | 0.057 | 0.333 |
| 250  | 43.57 | 43.26 | 28.73 | 1.23 | 5.53 | 105.38 | 0.373 | 0.204 | 0.146 | 0.067 | 0.304 |
| 500  | 43.51 | 43.20 | 28.41 | 1.20 | 5.58 | 105.91 | 0.367 | 0.205 | 0.148 | 0.058 | 0.318 |
| 1000 | 43.47 | 43.17 | 28.67 | 1.17 | 5.45 | 105.36 | 0.357 | 0.201 | 0.146 | 0.061 | 0.351 |
| 2000 | 43.44 | 43.13 | 29.27 | 1.18 | 5.40 | 107.56 | 0.359 | 0.199 | 0.146 | 0.060 | 0.356 |
| 0    | 42.94 | 42.66 | 25.40 | 1.23 | 6.60 | 101.17 | 0.380 | 0.246 | 0.158 | 0.138 | 3.850 |
| 250  | 42.96 | 42.67 | 26.22 | 1.22 | 6.25 | 100.63 | 0.377 | 0.233 | 0.153 | 0.114 | 2.830 |
| 500  | 42.70 | 42.61 | 25.99 | 1.22 | 6.31 | 100.41 | 0.377 | 0.236 | 0.154 | 0.110 | 2.850 |
| 1000 | 42.06 | 42.57 | 26.20 | 1.19 | 6.16 | 99.73  | 0.367 | 0.230 | 0.151 | 0.121 | 2.940 |
| 2000 | 42.02 | 42.53 | 26.73 | 1.19 | 6.08 | 100.30 | 0.369 | 0.228 | 0.149 | 0.129 | 3.700 |

|      |    |       |       |       |      |      |        |       |       |       |       |       |
|------|----|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 71 | 43.70 | 43.32 | 25.47 | 1.44 | 7.07 | 109.07 | 0.434 | 0.260 | 0.170 | 0.156 | 4.940 |
| 250  |    | 43.72 | 43.33 | 26.36 | 1.44 | 6.76 | 109.64 | 0.436 | 0.248 | 0.165 | 0.129 | 3.520 |
| 500  |    | 43.64 | 43.26 | 26.02 | 1.43 | 6.83 | 109.39 | 0.435 | 0.251 | 0.167 | 0.126 | 3.540 |
| 1000 |    | 43.60 | 43.22 | 26.30 | 1.39 | 6.69 | 108.92 | 0.424 | 0.246 | 0.165 | 0.139 | 3.650 |
| 2000 |    | 43.55 | 43.17 | 26.78 | 1.40 | 6.62 | 110.40 | 0.427 | 0.244 | 0.164 | 0.152 | 4.620 |

|      |    |       |       |       |      |      |        |       |       |       |       |       |
|------|----|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 72 | 42.80 | 42.49 | 27.15 | 1.23 | 5.97 | 106.80 | 0.381 | 0.224 | 0.157 | 0.202 | 5.570 |
| 250  |    | 42.83 | 42.51 | 28.07 | 1.23 | 5.60 | 106.48 | 0.381 | 0.213 | 0.151 | 0.171 | 4.360 |
| 500  |    | 42.76 | 42.45 | 27.69 | 1.22 | 5.71 | 106.08 | 0.379 | 0.214 | 0.152 | 0.163 | 4.330 |
| 1000 |    | 42.72 | 42.42 | 28.08 | 1.18 | 5.57 | 105.95 | 0.367 | 0.209 | 0.150 | 0.189 | 4.760 |
| 2000 |    | 42.68 | 42.38 | 28.57 | 1.18 | 5.49 | 106.93 | 0.368 | 0.206 | 0.149 | 0.204 | 6.200 |

# \*\*\* SPRING ELECTRIC SOURCE CURRENT TEST PROGRAM \*\*\*

## CONTROL UNITS

11/24/79

WIND LIFE TEST -- 120, 2300 Hz

| HOURS | UNIT | CAPACITANCE (uf) |       |       |       | DISSIPATION FACTOR (Z) |        |       |       | FREQ (MHz) |       |       |     | DCI (uA) |  | FUSE |
|-------|------|------------------|-------|-------|-------|------------------------|--------|-------|-------|------------|-------|-------|-----|----------|--|------|
|       |      | 120Hz            | 1KHz  | 40KHz | 120Hz | 1KHz                   | 40KHz  | 120Hz | 40KHz | 1KHz       | 40KHz | 25C   | 85C |          |  |      |
| 0     | 1    | 40.68            | 40.41 | 23.46 | 1.27  | 6.90                   | 101.94 | 0.414 | 0.272 | 6.173      | 0.112 | 0.444 |     |          |  |      |
| 250   |      | 40.54            | 40.25 | 25.91 | 1.23  | 6.07                   | 107.86 | 0.402 | 0.240 | 0.166      | 0.093 | 0.353 |     |          |  |      |
| 500   |      | 40.45            | 40.15 | 25.64 | 1.25  | 6.23                   | 109.88 | 0.409 | 0.247 | 0.171      | 0.116 | 0.357 |     |          |  |      |
| 1000  |      | 40.45            | 40.13 | 26.27 | 1.27  | 6.11                   | 111.41 | 0.416 | 0.243 | 0.169      | 0.081 | 0.335 |     |          |  |      |
| 2000  |      | 40.34            | 39.99 | 25.83 | 1.32  | 6.31                   | 113.12 | 0.433 | 0.251 | 0.174      | 0.096 | 0.302 |     |          |  |      |
| 0     | 2    | 41.33            | 41.07 | 24.27 | 1.22  | 6.58                   | 103.95 | 0.392 | 0.255 | 0.170      | 0.086 | 0.293 |     |          |  |      |
| 250   |      | 41.16            | 40.88 | 26.78 | 1.20  | 5.95                   | 113.41 | 0.387 | 0.232 | 0.169      | 0.075 | 0.188 |     |          |  |      |
| 500   |      | 41.07            | 40.77 | 26.41 | 1.23  | 6.14                   | 115.64 | 0.397 | 0.240 | 0.174      | 0.091 | 0.173 |     |          |  |      |
| 1000  |      | 41.07            | 40.75 | 26.99 | 1.25  | 6.06                   | 117.44 | 0.405 | 0.237 | 0.173      | 0.078 | 0.163 |     |          |  |      |
| 2000  |      | 40.97            | 40.63 | 26.57 | 1.30  | 6.30                   | 120.72 | 0.421 | 0.247 | 0.181      | 0.068 | 0.188 |     |          |  |      |
| 0     | 3    | 41.98            | 41.71 | 24.22 | 1.25  | 6.95                   | 104.48 | 0.397 | 0.265 | 0.172      | 0.074 | 0.278 |     |          |  |      |
| 250   |      | 41.86            | 41.59 | 26.43 | 1.24  | 6.49                   | 122.12 | 0.392 | 0.249 | 0.184      | 0.066 | 0.179 |     |          |  |      |
| 500   |      | 41.77            | 41.50 | 26.16 | 1.25  | 6.70                   | 126.32 | 0.399 | 0.257 | 0.192      | 0.084 | 0.146 |     |          |  |      |
| 1000  |      | 41.78            | 41.49 | 26.77 | 1.28  | 6.65                   | 130.65 | 0.405 | 0.255 | 0.194      | 0.076 | 0.149 |     |          |  |      |
| 2000  |      | 41.69            | 41.39 | 26.51 | 1.32  | 6.90                   | 135.75 | 0.420 | 0.265 | 0.204      | 0.066 | 0.158 |     |          |  |      |
| 0     | 4    | 41.13            | 40.83 | 21.73 | 1.51  | 8.40                   | 104.11 | 0.406 | 0.327 | 0.191      | 0.079 | 0.264 |     |          |  |      |
| 250   |      | 41.02            | 40.65 | 24.02 | 1.43  | 7.40                   | 107.35 | 0.463 | 0.290 | 0.178      | 0.085 | 0.191 |     |          |  |      |
| 500   |      | 40.91            | 40.53 | 23.73 | 1.46  | 7.63                   | 108.20 | 0.474 | 0.300 | 0.181      | 0.113 | 0.254 |     |          |  |      |
| 1000  |      | 40.92            | 40.52 | 24.27 | 1.48  | 7.46                   | 108.54 | 0.479 | 0.293 | 0.178      | 0.120 | 0.352 |     |          |  |      |
| 2000  |      | 40.83            | 40.41 | 24.00 | 1.51  | 7.82                   | 109.75 | 0.492 | 0.303 | 0.182      | 0.114 | 0.367 |     |          |  |      |
| 0     | 5    | 41.22            | 40.95 | 22.87 | 1.37  | 7.78                   | 113.01 | 0.441 | 0.302 | 0.197      | 0.075 | 0.284 |     |          |  |      |
| 250   |      | 41.05            | 40.76 | 24.85 | 1.33  | 7.10                   | 120.66 | 0.430 | 0.277 | 0.193      | 0.061 | 0.169 |     |          |  |      |
| 500   |      | 40.95            | 40.64 | 24.36 | 1.37  | 7.38                   | 122.49 | 0.443 | 0.289 | 0.200      | 0.085 | 0.157 |     |          |  |      |
| 1000  |      | 40.95            | 40.62 | 24.81 | 1.39  | 7.26                   | 123.29 | 0.451 | 0.284 | 0.198      | 0.075 | 0.150 |     |          |  |      |
| 2000  |      | 40.85            | 40.49 | 24.41 | 1.45  | 7.53                   | 125.83 | 0.472 | 0.296 | 0.205      | 0.061 | 0.158 |     |          |  |      |
| 0     | 6    | 42.02            | 41.75 | 25.36 | 1.22  | 6.39                   | 104.12 | 0.385 | 0.240 | 0.163      | 0.101 | 0.307 |     |          |  |      |
| 250   |      | 41.90            | 41.61 | 28.24 | 1.16  | 5.59                   | 111.91 | 0.367 | 0.214 | 0.158      | 0.074 | 0.198 |     |          |  |      |
| 500   |      | 41.80            | 41.51 | 27.87 | 1.18  | 5.80                   | 115.14 | 0.374 | 0.222 | 0.164      | 0.098 | 0.185 |     |          |  |      |
| 1000  |      | 41.81            | 41.50 | 28.50 | 1.20  | 5.71                   | 116.84 | 0.382 | 0.219 | 0.163      | 0.082 | 0.167 |     |          |  |      |
| 2000  |      | 41.73            | 41.40 | 28.16 | 1.24  | 5.92                   | 120.22 | 0.395 | 0.228 | 0.170      | 0.070 | 0.187 |     |          |  |      |
| 0     | 7    | 42.55            | 42.29 | 26.11 | 1.20  | 6.10                   | 105.41 | 0.373 | 0.230 | 0.161      | 0.085 | 0.376 |     |          |  |      |
| 250   |      | 42.43            | 42.16 | 29.32 | 1.11  | 5.29                   | 112.78 | 0.348 | 0.200 | 0.153      | 0.078 | 0.207 |     |          |  |      |
| 500   |      | 42.34            | 42.06 | 28.97 | 1.12  | 5.42                   | 114.53 | 0.351 | 0.205 | 0.157      | 0.086 | 0.218 |     |          |  |      |
| 1000  |      | 42.36            | 42.06 | 29.58 | 1.13  | 5.30                   | 114.85 | 0.355 | 0.200 | 0.154      | 0.079 | 0.187 |     |          |  |      |
| 2000  |      | 42.28            | 41.97 | 29.33 | 1.16  | 5.44                   | 117.33 | 0.363 | 0.206 | 0.159      | 0.060 | 0.194 |     |          |  |      |

ORIGINAL DATA  
IN PAPER QUALITY

|      |       |       |       |      |      |        |       |       |       |       |
|------|-------|-------|-------|------|------|--------|-------|-------|-------|-------|
| 0    | 41.16 | 41.16 | 29.79 | 1.37 | 6.79 | 103.06 | 0.477 | 0.310 | 0.170 | 0.011 |
| 250  | 41.40 | 41.40 | 27.00 | 1.37 | 6.79 | 103.06 | 0.477 | 0.310 | 0.170 | 0.011 |
| 500  | 41.65 | 40.91 | 26.40 | 1.34 | 6.79 | 103.06 | 0.477 | 0.310 | 0.170 | 0.011 |
| 1000 | 41.87 | 40.90 | 26.40 | 1.40 | 6.79 | 103.06 | 0.477 | 0.310 | 0.170 | 0.011 |
| 2000 | 41.87 | 40.90 | 26.40 | 1.40 | 6.79 | 103.06 | 0.477 | 0.310 | 0.170 | 0.011 |
| 0    | 40.14 | 40.23 | 22.87 | 1.40 | 7.93 | 103.06 | 0.477 | 0.310 | 0.170 | 0.011 |
| 250  | 40.37 | 40.03 | 23.67 | 1.39 | 7.93 | 103.06 | 0.477 | 0.310 | 0.170 | 0.011 |
| 500  | 40.74 | 39.83 | 23.67 | 1.45 | 7.93 | 103.06 | 0.477 | 0.310 | 0.170 | 0.011 |
| 1000 | 40.74 | 39.83 | 23.67 | 1.45 | 7.93 | 103.06 | 0.477 | 0.310 | 0.170 | 0.011 |
| 2000 | 40.07 | 39.64 | 23.33 | 1.56 | 7.93 | 103.06 | 0.477 | 0.310 | 0.170 | 0.011 |
| 0    | 42.00 | 41.73 | 25.24 | 1.25 | 6.46 | 107.31 | 0.391 | 0.246 | 0.169 | 0.094 |
| 250  | 41.84 | 41.54 | 27.96 | 1.24 | 5.75 | 113.17 | 0.392 | 0.220 | 0.161 | 0.086 |
| 500  | 41.73 | 41.41 | 27.55 | 1.23 | 5.94 | 114.77 | 0.391 | 0.228 | 0.166 | 0.092 |
| 1000 | 41.74 | 41.39 | 28.14 | 1.26 | 5.83 | 115.34 | 0.401 | 0.224 | 0.163 | 0.092 |
| 2000 | 41.61 | 41.22 | 27.82 | 1.34 | 6.11 | 119.57 | 0.427 | 0.236 | 0.171 | 0.092 |
| 0    | 39.31 | 38.97 | 26.73 | 1.51 | 8.56 | 100.60 | 0.511 | 0.350 | 0.193 | 0.105 |
| 250  | 39.07 | 38.69 | 22.54 | 1.55 | 7.94 | 108.84 | 0.528 | 0.327 | 0.192 | 0.090 |
| 500  | 38.94 | 38.52 | 22.12 | 1.61 | 8.24 | 109.82 | 0.548 | 0.341 | 0.193 | 0.090 |
| 1000 | 38.93 | 38.48 | 22.46 | 1.64 | 8.09 | 110.55 | 0.560 | 0.335 | 0.196 | 0.096 |
| 2000 | 38.79 | 38.32 | 22.26 | 1.71 | 8.35 | 113.47 | 0.584 | 0.347 | 0.203 | 0.105 |
| 0    | 42.36 | 42.09 | 24.64 | 1.27 | 6.89 | 104.88 | 0.397 | 0.261 | 0.169 | 0.090 |
| 250  | 42.27 | 42.00 | 27.07 | 1.18 | 6.14 | 113.10 | 0.372 | 0.233 | 0.166 | 0.086 |
| 500  | 42.18 | 41.90 | 26.52 | 1.20 | 6.35 | 114.52 | 0.378 | 0.241 | 0.172 | 0.088 |
| 1000 | 42.20 | 41.91 | 27.12 | 1.22 | 6.30 | 118.15 | 0.385 | 0.239 | 0.173 | 0.073 |
| 2000 | 42.13 | 41.82 | 26.86 | 1.26 | 6.54 | 122.44 | 0.398 | 0.249 | 0.181 | 0.061 |
| 0    | 40.96 | 40.55 | 22.08 | 1.61 | 7.98 | 101.35 | 0.522 | 0.313 | 0.183 | 0.091 |
| 250  | 40.80 | 40.37 | 23.78 | 1.54 | 7.24 | 103.17 | 0.497 | 0.285 | 0.173 | 0.079 |
| 500  | 40.66 | 40.23 | 23.37 | 1.56 | 7.48 | 103.59 | 0.511 | 0.296 | 0.176 | 0.101 |
| 1000 | 40.68 | 40.21 | 23.76 | 1.59 | 7.32 | 103.10 | 0.520 | 0.290 | 0.173 | 0.083 |
| 2000 | 40.55 | 40.06 | 23.55 | 1.65 | 7.52 | 104.28 | 0.539 | 0.299 | 0.176 | 0.073 |
| 0    | 41.22 | 40.91 | 22.33 | 1.42 | 7.73 | 107.16 | 0.458 | 0.301 | 0.191 | 0.077 |
| 250  | 40.97 | 40.62 | 24.55 | 1.45 | 7.23 | 117.66 | 0.471 | 0.283 | 0.191 | 0.064 |
| 500  | 40.83 | 40.43 | 24.08 | 1.51 | 7.52 | 118.98 | 0.492 | 0.296 | 0.197 | 0.084 |
| 1000 | 40.80 | 40.36 | 24.70 | 1.57 | 7.47 | 122.93 | 0.511 | 0.294 | 0.198 | 0.071 |
| 2000 | 40.60 | 40.13 | 24.44 | 1.67 | 7.80 | 128.36 | 0.546 | 0.309 | 0.209 | 0.059 |
| 0    | 40.61 | 40.27 | 23.54 | 1.42 | 6.83 | 106.54 | 0.465 | 0.270 | 0.180 | 0.060 |
| 250  | 40.49 | 40.13 | 26.30 | 1.34 | 5.92 | 110.25 | 0.439 | 0.235 | 0.167 | 0.083 |
| 500  | 40.35 | 39.98 | 25.93 | 1.36 | 6.08 | 111.43 | 0.448 | 0.242 | 0.171 | 0.110 |
| 1000 | 40.35 | 39.95 | 26.43 | 1.40 | 6.01 | 112.25 | 0.462 | 0.240 | 0.169 | 0.084 |
| 2000 | 40.27 | 39.80 | 26.12 | 1.46 | 6.22 | 114.48 | 0.481 | 0.249 | 0.174 | 0.068 |
| 0    | 41.79 | 41.45 | 23.87 | 1.41 | 7.12 | 100.85 | 0.446 | 0.273 | 0.168 | 0.074 |
| 250  | 41.61 | 41.25 | 26.07 | 1.32 | 6.31 | 102.73 | 0.422 | 0.243 | 0.157 | 0.058 |
| 500  | 41.47 | 41.12 | 25.71 | 1.35 | 6.50 | 103.34 | 0.430 | 0.251 | 0.160 | 0.084 |
| 1000 | 41.31 | 41.12 | 26.28 | 1.37 | 6.27 | 104.16 | 0.438 | 0.247 | 0.158 | 0.071 |
| 2000 | 41.41 | 41.00 | 26.19 | 1.41 | 6.56 | 106.58 | 0.453 | 0.255 | 0.163 | 0.057 |

|      |       |       |       |      |      |        |       |       |       |       |
|------|-------|-------|-------|------|------|--------|-------|-------|-------|-------|
| 0    | 40.41 | 40.41 | 21.56 | 1.48 | 7.77 | 103.47 | 0.412 | 0.197 | 0.077 | 0.248 |
| 250  | 40.42 | 40.41 | 23.76 | 1.47 | 7.67 | 115.37 | 0.413 | 0.193 | 0.055 | 0.163 |
| 500  | 40.43 | 39.96 | 23.73 | 1.53 | 7.94 | 116.47 | 0.504 | 0.197 | 0.077 | 0.151 |
| 1000 | 40.35 | 39.93 | 23.77 | 1.55 | 7.73 | 116.52 | 0.514 | 0.195 | 0.064 | 0.140 |
| 2000 | 40.21 | 39.75 | 23.66 | 1.64 | 8.04 | 119.05 | 0.540 | 0.202 | 0.054 | 0.144 |
| 0    | 40.40 | 40.16 | 21.71 | 1.39 | 7.79 | 101.93 | 0.456 | 0.187 | 0.073 | 0.242 |
| 250  | 40.25 | 39.89 | 23.60 | 1.41 | 7.11 | 105.50 | 0.464 | 0.176 | 0.056 | 0.156 |
| 500  | 40.12 | 39.75 | 23.21 | 1.45 | 7.39 | 106.43 | 0.477 | 0.182 | 0.081 | 0.146 |
| 1000 | 40.12 | 39.72 | 23.62 | 1.47 | 7.24 | 106.58 | 0.487 | 0.179 | 0.068 | 0.133 |
| 2000 | 40.01 | 39.57 | 23.49 | 1.54 | 7.44 | 107.95 | 0.510 | 0.183 | 0.052 | 0.127 |
| 0    | 40.72 | 40.43 | 23.17 | 1.34 | 7.04 | 107.17 | 0.435 | 0.184 | 0.082 | 0.248 |
| 250  | 40.55 | 40.24 | 25.36 | 1.32 | 6.60 | 120.67 | 0.433 | 0.189 | 0.065 | 0.171 |
| 500  | 40.43 | 40.11 | 24.95 | 1.36 | 6.85 | 122.64 | 0.446 | 0.196 | 0.082 | 0.160 |
| 1000 | 40.44 | 40.08 | 25.36 | 1.40 | 6.83 | 126.08 | 0.460 | 0.198 | 0.068 | 0.143 |
| 2000 | 40.32 | 39.92 | 25.08 | 1.48 | 7.08 | 129.94 | 0.486 | 0.206 | 0.056 | 0.144 |
| 0    | 41.38 | 41.09 | 24.80 | 1.28 | 6.50 | 103.01 | 0.411 | 0.165 | 0.074 | 0.266 |
| 250  | 41.21 | 40.88 | 27.04 | 1.25 | 5.82 | 104.90 | 0.402 | 0.154 | 0.060 | 0.165 |
| 500  | 41.09 | 40.75 | 26.62 | 1.27 | 6.03 | 105.85 | 0.412 | 0.158 | 0.078 | 0.153 |
| 1000 | 41.09 | 40.72 | 27.06 | 1.31 | 5.92 | 105.80 | 0.422 | 0.156 | 0.070 | 0.156 |
| 2000 | 40.98 | 40.59 | 27.02 | 1.37 | 6.11 | 109.73 | 0.442 | 0.162 | 0.061 | 0.172 |
| 0    | 40.82 | 40.54 | 23.94 | 1.29 | 6.79 | 103.55 | 0.418 | 0.172 | 0.101 | 0.572 |
| 250  | 40.65 | 40.37 | 23.46 | 1.33 | 7.06 | 111.06 | 0.433 | 0.188 | 0.074 | 0.279 |
| 500  | 40.49 | 40.19 | 25.66 | 1.30 | 6.50 | 120.55 | 0.427 | 0.187 | 0.057 | 0.155 |
| 1000 | 40.38 | 40.08 | 25.20 | 1.32 | 6.73 | 122.38 | 0.435 | 0.193 | 0.070 | 0.144 |
| 2000 | 40.40 | 40.07 | 25.82 | 1.35 | 6.66 | 125.35 | 0.443 | 0.193 | 0.062 | 0.141 |
| 0    | 42.50 | 42.24 | 23.68 | 1.32 | 7.46 | 114.82 | 0.413 | 0.193 | 0.084 | 0.370 |
| 250  | 42.37 | 42.10 | 26.17 | 1.26 | 6.67 | 124.28 | 0.394 | 0.189 | 0.057 | 0.227 |
| 500  | 42.28 | 42.00 | 25.85 | 1.27 | 6.85 | 126.83 | 0.400 | 0.195 | 0.071 | 0.230 |
| 1000 | 42.30 | 42.00 | 26.66 | 1.28 | 6.67 | 128.57 | 0.402 | 0.192 | 0.065 | 0.215 |
| 2000 | 42.22 | 41.91 | 26.52 | 1.31 | 6.80 | 131.01 | 0.412 | 0.197 | 0.054 | 0.238 |
| 0    | 40.08 | 39.77 | 21.85 | 1.39 | 7.67 | 102.23 | 0.461 | 0.186 | 0.063 | 0.203 |
| 250  | 39.84 | 39.47 | 23.88 | 1.42 | 7.00 | 105.55 | 0.474 | 0.176 | 0.062 | 0.139 |
| 500  | 39.68 | 39.28 | 23.50 | 1.48 | 7.25 | 106.10 | 0.495 | 0.180 | 0.073 | 0.132 |
| 1000 | 39.65 | 39.21 | 24.03 | 1.53 | 7.14 | 107.03 | 0.512 | 0.177 | 0.061 | 0.127 |
| 2000 | 39.48 | 38.99 | 23.76 | 1.63 | 7.45 | 109.88 | 0.549 | 0.184 | 0.052 | 0.143 |
| 0    | 42.06 | 41.81 | 25.03 | 1.17 | 6.58 | 101.13 | 0.371 | 0.161 | 0.104 | 0.245 |
| 250  | 41.96 | 41.69 | 27.77 | 1.12 | 5.67 | 106.68 | 0.355 | 0.153 | 0.070 | 0.157 |
| 500  | 41.84 | 41.57 | 27.29 | 1.14 | 5.86 | 108.47 | 0.362 | 0.158 | 0.066 | 0.205 |
| 1000 | 41.85 | 41.56 | 27.99 | 1.16 | 5.71 | 109.24 | 0.369 | 0.155 | 0.075 | 0.237 |
| 2000 | 41.77 | 41.44 | 27.89 | 1.22 | 5.81 | 111.65 | 0.386 | 0.159 | 0.057 | 0.147 |

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|      |    |       |       |       |      |      |        |       |       |       |       |       |
|------|----|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 26 | 42.37 | 42.13 | 24.4  | 1.29 | 7.01 | 113.57 | 0.410 | 0.264 | 0.183 | 0.115 | 0.316 |
| 250  |    | 42.25 | 41.97 | 27.16 | 1.27 | 6.62 | 131.54 | 0.318 | 0.251 | 0.193 | 0.065 | 0.179 |
| 500  |    | 42.11 | 41.83 | 26.59 | 1.30 | 6.99 | 135.28 | 0.411 | 0.266 | 0.203 | 0.076 | 0.189 |
| 1000 |    | 42.12 | 41.81 | 27.01 | 1.34 | 6.58 | 139.13 | 0.424 | 0.266 | 0.205 | 0.074 | 0.150 |
| 2000 |    | 42.03 | 41.69 | 26.66 | 1.32 | 7.26 | 144.93 | 0.447 | 0.278 | 0.215 | 0.063 | 0.214 |
| 0    | 27 | 40.67 | 40.50 | 22.76 | 1.50 | 7.55 | 103.44 | 0.487 | 0.277 | 0.181 | 0.152 | 1.345 |
| 250  |    | 40.73 | 40.32 | 24.88 | 1.46 | 6.81 | 106.30 | 0.483 | 0.269 | 0.170 | 0.110 | 1.083 |
| 500  |    | 40.57 | 40.16 | 24.31 | 1.51 | 7.09 | 106.97 | 0.494 | 0.281 | 0.175 | 0.128 | 1.426 |
| 1000 |    | 40.58 | 40.14 | 24.77 | 1.55 | 5.97 | 106.94 | 0.505 | 0.276 | 0.172 | 0.136 | 1.536 |
| 2000 |    | 40.49 | 40.02 | 24.66 | 1.59 | 7.10 | 108.16 | 0.522 | 0.282 | 0.175 | 0.139 | 2.133 |
| 0    | 28 | 41.05 | 40.70 | 23.41 | 1.46 | 7.08 | 105.71 | 0.472 | 0.277 | 0.180 | 0.103 | 0.302 |
| 250  |    | 40.95 | 40.59 | 26.21 | 1.38 | 6.23 | 115.20 | 0.446 | 0.244 | 0.175 | 0.082 | 0.225 |
| 500  |    | 40.80 | 40.45 | 25.83 | 1.38 | 6.43 | 118.28 | 0.449 | 0.253 | 0.182 | 0.100 | 0.256 |
| 1000 |    | 40.83 | 40.44 | 26.55 | 1.41 | 6.31 | 120.14 | 0.459 | 0.248 | 0.180 | 0.094 | 0.216 |
| 2000 |    | 40.74 | 40.33 | 26.55 | 1.46 | 6.46 | 124.36 | 0.475 | 0.255 | 0.186 | 0.074 | 0.302 |
| 0    | 29 | 41.18 | 40.89 | 22.34 | 1.34 | 7.78 | 99.35  | 0.433 | 0.303 | 0.177 | 0.100 | 0.236 |
| 250  |    | 41.07 | 40.74 | 24.13 | 1.31 | 6.94 | 103.49 | 0.425 | 0.271 | 0.169 | 0.064 | 0.193 |
| 500  |    | 40.93 | 40.60 | 23.67 | 1.35 | 7.26 | 104.33 | 0.439 | 0.285 | 0.174 | 0.071 | 0.195 |
| 1000 |    | 40.94 | 40.58 | 24.45 | 1.38 | 7.07 | 104.73 | 0.446 | 0.277 | 0.170 | 0.069 | 0.163 |
| 2000 |    | 40.86 | 40.46 | 24.35 | 1.43 | 7.20 | 106.09 | 0.464 | 0.283 | 0.173 | 0.064 | 0.210 |
| 0    | 30 | 41.99 | 41.72 | 25.91 | 1.22 | 6.28 | 109.53 | 0.386 | 0.240 | 0.168 | 0.087 | 0.190 |
| 250  |    | 41.85 | 41.55 | 28.39 | 1.22 | 5.82 | 119.57 | 0.387 | 0.223 | 0.168 | 0.063 | 0.169 |
| 500  |    | 41.71 | 41.42 | 27.56 | 1.24 | 6.12 | 121.64 | 0.396 | 0.235 | 0.176 | 0.083 | 0.245 |
| 1000 |    | 41.75 | 41.42 | 28.24 | 1.27 | 6.04 | 123.72 | 0.405 | 0.232 | 0.174 | 0.114 | 0.380 |
| 2000 |    | 41.69 | 41.35 | 27.93 | 1.31 | 6.24 | 127.07 | 0.417 | 0.240 | 0.181 | 0.130 | 0.581 |
| 0    | 31 | 41.62 | 41.26 | 22.65 | 1.49 | 7.79 | 102.07 | 0.476 | 0.301 | 0.179 | 0.099 | 0.267 |
| 250  |    | 41.45 | 41.05 | 24.97 | 1.45 | 6.99 | 107.40 | 0.464 | 0.271 | 0.171 | 0.077 | 0.228 |
| 500  |    | 41.29 | 40.88 | 24.56 | 1.40 | 7.26 | 108.92 | 0.477 | 0.283 | 0.176 | 0.082 | 0.241 |
| 1000 |    | 41.30 | 40.85 | 25.29 | 1.52 | 7.09 | 110.54 | 0.488 | 0.276 | 0.174 | 0.081 | 0.207 |
| 2000 |    | 41.17 | 40.69 | 25.28 | 1.58 | 7.25 | 114.18 | 0.511 | 0.283 | 0.180 | 0.069 | 0.265 |
| 0    | 32 | 41.37 | 41.09 | 23.91 | 1.29 | 6.99 | 105.41 | 0.415 | 0.271 | 0.175 | 0.089 | 0.199 |
| 250  |    | 41.23 | 40.92 | 26.56 | 1.27 | 6.32 | 116.93 | 0.409 | 0.246 | 0.175 | 0.073 | 0.182 |
| 500  |    | 41.10 | 40.78 | 26.06 | 1.31 | 6.61 | 120.47 | 0.422 | 0.258 | 0.184 | 0.078 | 0.406 |
| 1000 |    | 41.11 | 40.75 | 26.66 | 1.35 | 6.58 | 124.06 | 0.437 | 0.257 | 0.185 | 0.083 | 0.344 |
| 2000 |    | 41.00 | 40.60 | 26.40 | 1.45 | 6.91 | 129.99 | 0.468 | 0.271 | 0.196 | 0.078 | 0.458 |
| 0    | 33 | 40.60 | 40.53 | 22.61 | 1.32 | 7.49 | 108.70 | 0.430 | 0.294 | 0.191 | 0.089 | 0.239 |
| 250  |    | 40.68 | 40.38 | 24.97 | 1.28 | 6.64 | 115.82 | 0.417 | 0.262 | 0.185 | 0.062 | 0.183 |
| 500  |    | 40.56 | 40.26 | 24.50 | 1.30 | 6.88 | 117.52 | 0.426 | 0.272 | 0.191 | 0.071 | 0.188 |
| 1000 |    | 40.58 | 40.26 | 25.16 | 1.32 | 6.71 | 118.95 | 0.431 | 0.265 | 0.188 | 0.074 | 0.165 |
| 2000 |    | 40.50 | 40.15 | 25.13 | 1.37 | 6.87 | 122.88 | 0.449 | 0.272 | 0.195 | 0.060 | 0.228 |
| 0    | 34 | 42.58 | 42.34 | 26.36 | 1.15 | 6.10 | 109.10 | 0.357 | 0.229 | 0.165 | 0.119 | 0.823 |
| 250  |    | 42.47 | 42.22 | 29.20 | 1.11 | 5.68 | 122.35 | 0.346 | 0.211 | 0.167 | 0.078 | 0.447 |
| 500  |    | 42.36 | 42.11 | 28.60 | 1.12 | 5.87 | 125.88 | 0.351 | 0.222 | 0.175 | 0.085 | 0.471 |
| 1000 |    | 42.39 | 42.13 | 29.40 | 1.15 | 5.82 | 129.75 | 0.359 | 0.220 | 0.176 | 0.080 | 0.416 |
| 2000 |    | 42.34 | 42.06 | 29.08 | 1.18 | 5.98 | 132.92 | 0.369 | 0.226 | 0.182 | 0.067 | 0.515 |



|      |       |       |       |      |      |        |       |       |       |       |       |
|------|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 41.72 | 41.50 | 23.83 | 1.26 | 6.51 | 104.25 | 0.374 | 0.265 | 0.173 | 0.120 | 0.306 |
| 250  | 41.63 | 41.33 | 26.38 | 1.26 | 6.57 | 110.72 | 0.376 | 0.241 | 0.167 | 0.077 | 0.227 |
| 500  | 41.54 | 41.20 | 25.74 | 1.28 | 6.55 | 111.76 | 0.409 | 0.253 | 0.173 | 0.080 | 0.252 |
| 1000 | 41.53 | 41.19 | 26.37 | 1.30 | 6.41 | 112.30 | 0.417 | 0.249 | 0.169 | 0.081 | 0.236 |
| 2000 | 41.45 | 41.08 | 26.14 | 1.36 | 6.56 | 113.80 | 0.434 | 0.255 | 0.173 | 0.088 | 0.399 |
| 36   |       |       |       |      |      |        |       |       |       |       |       |
| 0    | 41.72 | 41.45 | 24.97 | 1.26 | 6.60 | 111.66 | 0.400 | 0.253 | 0.178 | 0.114 | 0.360 |
| 250  | 41.61 | 41.30 | 27.12 | 1.30 | 6.58 | 126.87 | 0.416 | 0.246 | 0.186 | 0.118 | 0.389 |
| 500  | 41.49 | 41.18 | 26.33 | 1.33 | 6.74 | 129.65 | 0.426 | 0.251 | 0.196 | 0.126 | 0.512 |
| 1000 | 41.52 | 41.19 | 26.91 | 1.37 | 6.74 | 133.64 | 0.439 | 0.260 | 0.198 | 0.121 | 0.435 |
| 2000 | 41.46 | 41.11 | 26.55 | 1.42 | 7.03 | 138.33 | 0.455 | 0.272 | 0.207 | 0.192 | 0.979 |
| 37   |       |       |       |      |      |        |       |       |       |       |       |
| 0    | 41.08 | 41.65 | 25.64 | 1.13 | 6.14 | 103.80 | 0.357 | 0.235 | 0.161 | 0.110 | 1.045 |
| 250  | 41.79 | 41.54 | 28.18 | 1.10 | 5.49 | 110.45 | 0.350 | 0.210 | 0.156 | 0.100 | 1.625 |
| 500  | 41.67 | 41.43 | 27.66 | 1.12 | 5.70 | 112.58 | 0.355 | 0.219 | 0.162 | 0.115 | 2.320 |
| 1000 | 41.71 | 41.43 | 28.28 | 1.14 | 5.57 | 113.05 | 0.361 | 0.214 | 0.159 | 0.137 | 2.600 |
| 2000 | 41.64 | 41.34 | 28.05 | 1.17 | 5.69 | 114.90 | 0.372 | 0.219 | 0.163 | 0.161 | 3.860 |
| 38   |       |       |       |      |      |        |       |       |       |       |       |
| 0    | 42.42 | 42.16 | 25.56 | 1.23 | 6.64 | 110.50 | 0.386 | 0.251 | 0.172 | 0.145 | 1.219 |
| 250  | 42.33 | 42.04 | 27.72 | 1.24 | 6.20 | 121.33 | 0.387 | 0.235 | 0.174 | 0.086 | 0.691 |
| 500  | 42.21 | 41.93 | 27.05 | 1.25 | 6.50 | 123.94 | 0.394 | 0.247 | 0.182 | 0.092 | 0.767 |
| 1000 | 42.25 | 41.95 | 27.63 | 1.28 | 6.43 | 126.48 | 0.401 | 0.244 | 0.182 | 0.096 | 0.744 |
| 2000 | 42.20 | 41.88 | 27.34 | 1.31 | 6.64 | 129.86 | 0.412 | 0.252 | 0.189 | 0.086 | 1.032 |
| 39   |       |       |       |      |      |        |       |       |       |       |       |
| 0    | 39.81 | 39.50 | 21.28 | 1.43 | 8.11 | 99.79  | 0.475 | 0.327 | 0.187 | 0.101 | 0.282 |
| 250  | 39.63 | 39.27 | 22.93 | 1.44 | 7.38 | 102.10 | 0.483 | 0.299 | 0.177 | 0.062 | 0.189 |
| 500  | 39.49 | 39.11 | 22.40 | 1.49 | 7.69 | 102.32 | 0.500 | 0.313 | 0.182 | 0.069 | 0.217 |
| 1000 | 39.49 | 39.08 | 22.91 | 1.52 | 7.50 | 102.46 | 0.511 | 0.305 | 0.178 | 0.068 | 0.172 |
| 2000 | 39.36 | 38.91 | 22.67 | 1.60 | 7.67 | 103.22 | 0.541 | 0.314 | 0.181 | 0.059 | 0.226 |
| 40   |       |       |       |      |      |        |       |       |       |       |       |
| 0    | 41.70 | 41.44 | 24.03 | 1.25 | 6.94 | 106.85 | 0.398 | 0.267 | 0.177 | 0.115 | 0.800 |
| 250  | 41.57 | 41.29 | 26.34 | 1.23 | 6.29 | 117.61 | 0.392 | 0.242 | 0.178 | 0.416 | 0.611 |
| 500  | 41.46 | 41.28 | 25.68 | 1.26 | 6.22 | 116.17 | 0.403 | 0.240 | 0.180 | 0.293 | 0.938 |
| 1000 | 41.49 | 41.18 | 26.03 | 1.27 | 6.48 | 120.44 | 0.407 | 0.250 | 0.184 | 0.132 | 1.045 |
| 2000 | 41.43 | 41.10 | 25.73 | 1.32 | 6.72 | 123.59 | 0.424 | 0.260 | 0.191 | 0.147 | 1.512 |
| 41   |       |       |       |      |      |        |       |       |       |       |       |
| 0    | 40.54 | 40.27 | 23.42 | 1.25 | 6.88 | 102.83 | 0.410 | 0.272 | 0.175 | 0.187 | 1.169 |
| 250  | 40.42 | 40.13 | 25.68 | 1.26 | 6.32 | 113.97 | 0.412 | 0.251 | 0.177 | 0.093 | 0.568 |
| 500  | 40.31 | 40.02 | 25.19 | 1.28 | 6.60 | 116.92 | 0.421 | 0.263 | 0.185 | 0.089 | 0.522 |
| 1000 | 40.34 | 40.02 | 25.69 | 1.32 | 6.60 | 121.69 | 0.433 | 0.263 | 0.189 | 0.092 | 0.433 |
| 2000 | 40.27 | 39.93 | 25.41 | 1.37 | 6.85 | 125.99 | 0.451 | 0.273 | 0.197 | 0.080 | 0.519 |
| 42   |       |       |       |      |      |        |       |       |       |       |       |
| 0    | 40.75 | 40.47 | 22.29 | 1.46 | 8.58 | 125.14 | 0.475 | 0.337 | 0.223 | 0.140 | 2.760 |
| 250  | 40.63 | 40.33 | 24.71 | 1.42 | 7.68 | 135.64 | 0.465 | 0.303 | 0.218 | 0.112 | 2.150 |
| 500  | 40.51 | 40.21 | 24.26 | 1.45 | 7.94 | 137.71 | 0.474 | 0.314 | 0.226 | 0.124 | 2.870 |
| 1000 | 40.53 | 40.20 | 24.47 | 1.50 | 8.03 | 142.77 | 0.490 | 0.318 | 0.232 | 0.148 | 3.016 |
| 2000 | 40.45 | 40.10 | 24.22 | 1.56 | 8.37 | 147.97 | 0.512 | 0.332 | 0.243 | 0.169 | 4.300 |
| 43   |       |       |       |      |      |        |       |       |       |       |       |
| 0    | 41.13 | 40.85 | 22.74 | 1.32 | 7.45 | 101.39 | 0.426 | 0.290 | 0.177 | 0.113 | 0.210 |
| 250  | 40.91 | 40.57 | 24.55 | 1.37 | 6.79 | 105.11 | 0.443 | 0.267 | 0.170 | 0.058 | 0.162 |
| 500  | 40.75 | 40.39 | 23.97 | 1.41 | 7.10 | 106.15 | 0.461 | 0.280 | 0.176 | 0.061 | 0.158 |
| 1000 | 40.74 | 40.35 | 24.53 | 1.46 | 6.99 | 107.95 | 0.474 | 0.276 | 0.175 | 0.065 | 0.151 |
| 2000 | 40.64 | 40.24 | 24.22 | 1.56 | 8.37 | 147.97 | 0.512 | 0.332 | 0.243 | 0.169 | 4.300 |

|    |      |       |       |       |      |      |        |       |       |       |       |        |
|----|------|-------|-------|-------|------|------|--------|-------|-------|-------|-------|--------|
| 44 | 0    | 41.11 | 40.81 | 25.34 | 1.30 | 7.29 | 108.53 | 0.440 | 0.261 | 0.185 | 0.091 | 0.415  |
|    | 250  | 41.00 | 40.69 | 25.23 | 1.31 | 6.56 | 117.56 | 0.443 | 0.274 | 0.182 | 0.083 | 0.418  |
|    | 500  | 40.88 | 40.58 | 25.12 | 1.31 | 6.71 | 118.74 | 0.442 | 0.263 | 0.186 | 0.085 | 0.420  |
|    | 1000 | 40.71 | 40.50 | 25.02 | 1.31 | 6.55 | 119.60 | 0.442 | 0.257 | 0.185 | 0.089 | 0.424  |
|    | 2000 | 40.85 | 40.51 | 25.62 | 1.36 | 6.63 | 121.80 | 0.443 | 0.263 | 0.189 | 0.057 | 0.355  |
| 45 | 0    | 42.26 | 42.01 | 26.07 | 1.15 | 6.01 | 104.77 | 0.360 | 0.226 | 0.150 | 0.083 | 0.496  |
|    | 250  | 42.17 | 41.89 | 26.98 | 1.12 | 5.78 | 109.55 | 0.373 | 0.200 | 0.150 | 0.060 | 0.412  |
|    | 500  | 42.06 | 41.78 | 28.50 | 1.12 | 5.44 | 111.14 | 0.374 | 0.207 | 0.155 | 0.067 | 0.425  |
|    | 1000 | 42.02 | 41.79 | 29.35 | 1.11 | 5.29 | 111.67 | 0.357 | 0.201 | 0.151 | 0.068 | 0.488  |
|    | 2000 | 42.03 | 41.72 | 29.03 | 1.16 | 5.37 | 112.86 | 0.366 | 0.205 | 0.154 | 0.054 | 0.430  |
| 46 | 0    | 42.62 | 42.30 | 26.27 | 1.27 | 6.13 | 107.33 | 0.396 | 0.233 | 0.163 | 0.161 | 1.680  |
|    | 250  | 42.52 | 42.19 | 29.07 | 1.26 | 5.61 | 117.42 | 0.393 | 0.212 | 0.161 | 0.120 | 1.464  |
|    | 500  | 42.39 | 42.06 | 28.70 | 1.26 | 5.78 | 120.63 | 0.395 | 0.219 | 0.167 | 0.132 | 1.876  |
|    | 1000 | 42.43 | 42.07 | 29.64 | 1.29 | 5.70 | 123.15 | 0.404 | 0.216 | 0.165 | 0.150 | 2.070  |
|    | 2000 | 42.35 | 41.98 | 29.29 | 1.33 | 5.83 | 125.36 | 0.415 | 0.221 | 0.170 | 0.166 | 3.340  |
| 47 | 0    | 41.79 | 41.49 | 25.42 | 1.31 | 6.46 | 111.49 | 0.416 | 0.248 | 0.175 | 0.091 | 0.210  |
|    | 250  | 41.67 | 41.33 | 28.32 | 1.30 | 5.80 | 121.33 | 0.415 | 0.223 | 0.170 | 0.064 | 0.179  |
|    | 500  | 41.53 | 41.20 | 27.89 | 1.30 | 5.95 | 123.23 | 0.416 | 0.230 | 0.176 | 0.071 | 0.166  |
|    | 1000 | 41.56 | 41.19 | 28.73 | 1.34 | 5.86 | 125.49 | 0.428 | 0.226 | 0.174 | 0.074 | 0.173  |
|    | 2000 | 41.47 | 41.08 | 28.52 | 1.39 | 5.98 | 127.91 | 0.444 | 0.232 | 0.178 | 0.061 | 0.262  |
| 48 | 0    | 41.95 | 41.69 | 24.60 | 1.25 | 6.72 | 111.62 | 0.395 | 0.256 | 0.181 | 0.082 | 0.352  |
|    | 250  | 41.87 | 41.60 | 27.28 | 1.21 | 6.09 | 123.27 | 0.383 | 0.233 | 0.180 | 0.061 | 0.241  |
|    | 500  | 41.76 | 41.50 | 26.83 | 1.22 | 6.31 | 125.93 | 0.388 | 0.242 | 0.187 | 0.066 | 0.229  |
|    | 1000 | 41.79 | 41.51 | 27.59 | 1.24 | 6.23 | 129.09 | 0.393 | 0.239 | 0.186 | 0.066 | 0.205  |
|    | 2000 | 41.75 | 41.45 | 27.33 | 1.27 | 6.39 | 132.11 | 0.402 | 0.246 | 0.192 | 0.052 | 0.292  |
| 49 | 0    | 42.31 | 41.99 | 27.03 | 1.26 | 5.87 | 102.66 | 0.395 | 0.222 | 0.151 | 0.162 | 1.655  |
|    | 250  | 42.17 | 41.82 | 29.90 | 1.21 | 5.13 | 104.32 | 0.381 | 0.195 | 0.139 | 0.115 | 0.745  |
|    | 500  | 42.02 | 41.66 | 29.42 | 1.23 | 5.30 | 105.38 | 0.388 | 0.203 | 0.143 | 0.145 | 0.806  |
|    | 1000 | 42.04 | 41.64 | 30.01 | 1.27 | 5.21 | 104.92 | 0.402 | 0.199 | 0.139 | 0.124 | 0.440  |
|    | 2000 | 41.93 | 41.49 | 29.74 | 1.35 | 5.34 | 106.24 | 0.427 | 0.205 | 0.142 | 0.134 | 0.904  |
| 50 | 0    | 42.39 | 42.06 | 26.12 | 1.35 | 6.39 | 110.45 | 0.422 | 0.242 | 0.168 | 0.087 | 0.285  |
|    | 250  | 42.18 | 41.82 | 29.28 | 1.27 | 5.62 | 116.15 | 0.400 | 0.214 | 0.158 | 0.090 | 0.239  |
|    | 500  | 42.03 | 41.65 | 28.86 | 1.30 | 5.83 | 118.61 | 0.411 | 0.223 | 0.164 | 0.107 | 0.278  |
|    | 1000 | 42.03 | 41.62 | 29.58 | 1.34 | 5.73 | 119.09 | 0.424 | 0.219 | 0.160 | 0.082 | 0.233  |
|    | 2000 | 41.94 | 41.49 | 29.27 | 1.41 | 5.87 | 120.43 | 0.445 | 0.225 | 0.164 | 0.078 | 0.295  |
| 51 | 0    | 42.09 | 41.78 | 23.61 | 1.39 | 7.72 | 111.36 | 0.437 | 0.294 | 0.188 | 0.361 | 12.090 |
|    | 250  | 41.93 | 41.56 | 26.06 | 1.40 | 6.96 | 115.52 | 0.442 | 0.266 | 0.176 | 0.403 | 11.690 |
|    | 500  | 41.76 | 41.37 | 25.47 | 1.46 | 7.35 | 117.59 | 0.463 | 0.283 | 0.184 | 0.464 | 15.810 |
|    | 1000 | 41.77 | 41.34 | 25.98 | 1.50 | 7.22 | 117.57 | 0.478 | 0.278 | 0.180 | 0.578 | 16.670 |
|    | 2000 | 41.64 | 41.16 | 25.64 | 1.60 | 7.46 | 118.86 | 0.510 | 0.288 | 0.184 | 0.733 | 21.300 |
| 52 | 0    | 42.62 | 42.25 | 25.26 | 1.39 | 6.63 | 100.83 | 0.434 | 0.250 | 0.159 | 0.257 | 6.150  |
|    | 250  | 42.50 | 42.07 | 27.96 | 1.38 | 5.91 | 103.38 | 0.431 | 0.224 | 0.147 | 0.185 | 3.570  |
|    | 500  | 42.33 | 41.92 | 27.56 | 1.39 | 6.16 | 103.88 | 0.437 | 0.234 | 0.151 | 0.196 | 4.380  |
|    | 1000 | 42.38 | 41.93 | 28.09 | 1.43 | 6.04 | 104.11 | 0.446 | 0.229 | 0.147 | 0.207 | 4.380  |
|    | 2000 | 42.31 | 41.84 | 27.74 | 1.47 | 6.16 | 104.13 | 0.460 | 0.234 | 0.149 | 0.229 | 5.530  |

|      |       |       |       |      |      |        |       |       |       |       |        |
|------|-------|-------|-------|------|------|--------|-------|-------|-------|-------|--------|
| 0    | 42.49 | 42.10 | 24.76 | 1.50 | 6.93 | 101.59 | 0.467 | 0.251 | 0.168 | 0.098 | 0.400  |
| 250  | 42.26 | 41.81 | 27.03 | 1.48 | 6.83 | 107.43 | 0.464 | 0.241 | 0.158 | 0.095 | 0.310  |
| 500  | 42.07 | 41.62 | 26.45 | 1.57 | 6.64 | 109.26 | 0.478 | 0.254 | 0.164 | 0.109 | 0.331  |
| 1000 | 42.10 | 41.60 | 27.05 | 1.57 | 6.51 | 109.50 | 0.494 | 0.250 | 0.161 | 0.081 | 0.311  |
| 2000 | 41.93 | 41.43 | 26.64 | 1.65 | 6.72 | 110.14 | 0.521 | 0.258 | 0.164 | 0.078 | 0.436  |
| 0    | 42.62 | 42.29 | 25.52 | 1.56 | 6.60 | 103.76 | 0.422 | 0.248 | 0.162 | 0.099 | 0.280  |
| 250  | 42.40 | 42.05 | 28.00 | 1.28 | 5.93 | 105.96 | 0.401 | 0.234 | 0.151 | 0.075 | 0.176  |
| 500  | 42.25 | 41.89 | 27.46 | 1.31 | 6.19 | 107.00 | 0.410 | 0.235 | 0.155 | 0.083 | 0.199  |
| 1000 | 42.27 | 41.88 | 28.14 | 1.34 | 6.07 | 107.06 | 0.421 | 0.231 | 0.151 | 0.085 | 0.163  |
| 2000 | 42.13 | 41.76 | 27.01 | 1.40 | 6.22 | 107.74 | 0.440 | 0.237 | 0.154 | 0.066 | 0.227  |
| 0    | 42.36 | 42.02 | 24.49 | 1.44 | 7.08 | 104.32 | 0.451 | 0.268 | 0.169 | 0.116 | 0.295  |
| 250  | 42.14 | 41.75 | 26.88 | 1.40 | 6.49 | 107.72 | 0.442 | 0.247 | 0.159 | 0.089 | 0.230  |
| 500  | 41.97 | 41.55 | 26.13 | 1.45 | 6.84 | 108.04 | 0.459 | 0.262 | 0.165 | 0.099 | 0.254  |
| 1000 | 41.98 | 41.52 | 26.66 | 1.51 | 6.74 | 108.37 | 0.478 | 0.259 | 0.162 | 0.072 | 0.211  |
| 2000 | 41.83 | 41.31 | 26.32 | 1.61 | 6.97 | 109.38 | 0.512 | 0.269 | 0.165 | 0.070 | 0.343  |
| 0    | 42.42 | 42.05 | 25.20 | 1.50 | 7.00 | 116.38 | 0.468 | 0.265 | 0.184 | 0.089 | 0.416  |
| 250  | 42.27 | 41.87 | 28.54 | 1.40 | 6.18 | 126.43 | 0.441 | 0.235 | 0.176 | 0.088 | 0.285  |
| 500  | 42.10 | 41.70 | 27.96 | 1.43 | 6.45 | 129.64 | 0.449 | 0.246 | 0.185 | 0.108 | 0.319  |
| 1000 | 42.14 | 41.71 | 28.77 | 1.46 | 6.35 | 131.36 | 0.461 | 0.242 | 0.182 | 0.076 | 0.272  |
| 2000 | 42.07 | 41.61 | 28.42 | 1.51 | 6.50 | 133.11 | 0.477 | 0.249 | 0.186 | 0.066 | 0.367  |
| 0    | 41.81 | 41.51 | 25.63 | 1.31 | 6.38 | 109.57 | 0.417 | 0.245 | 0.170 | 0.098 | 0.418  |
| 250  | 41.59 | 41.24 | 28.84 | 1.27 | 5.63 | 116.83 | 0.405 | 0.217 | 0.161 | 0.082 | 0.235  |
| 500  | 41.42 | 41.05 | 28.38 | 1.32 | 5.89 | 120.36 | 0.422 | 0.229 | 0.169 | 0.088 | 0.248  |
| 1000 | 41.41 | 41.00 | 29.14 | 1.38 | 5.82 | 121.77 | 0.442 | 0.226 | 0.166 | 0.066 | 0.215  |
| 2000 | 41.25 | 40.79 | 28.83 | 1.48 | 6.00 | 123.97 | 0.477 | 0.234 | 0.171 | 0.075 | 0.303  |
| 0    | 42.57 | 42.21 | 24.92 | 1.40 | 6.84 | 101.54 | 0.436 | 0.258 | 0.162 | 0.308 | 10.520 |
| 250  | 42.29 | 41.84 | 26.82 | 1.48 | 6.34 | 101.15 | 0.463 | 0.241 | 0.150 | 0.372 | 9.270  |
| 500  | 42.03 | 41.56 | 26.22 | 1.54 | 6.66 | 101.83 | 0.486 | 0.255 | 0.155 | 0.461 | 12.460 |
| 1000 | 41.99 | 41.47 | 26.50 | 1.61 | 6.58 | 100.70 | 0.508 | 0.253 | 0.151 | 0.526 | 13.010 |
| 2000 | 41.79 | 41.22 | 26.16 | 1.70 | 6.78 | 101.31 | 0.540 | 0.262 | 0.154 | 0.583 | 17.560 |
| 0    | 42.51 | 42.14 | 24.56 | 1.50 | 7.33 | 112.15 | 0.468 | 0.277 | 0.182 | 0.108 | 0.490  |
| 250  | 42.25 | 41.82 | 27.04 | 1.49 | 6.64 | 115.33 | 0.467 | 0.253 | 0.170 | 0.092 | 0.370  |
| 500  | 42.06 | 41.61 | 26.50 | 1.53 | 6.95 | 116.93 | 0.484 | 0.266 | 0.176 | 0.098 | 0.422  |
| 1000 | 42.07 | 41.57 | 27.02 | 1.59 | 6.85 | 117.03 | 0.502 | 0.262 | 0.172 | 0.077 | 0.369  |
| 2000 | 41.94 | 41.40 | 26.70 | 1.67 | 7.02 | 117.52 | 0.529 | 0.270 | 0.175 | 0.083 | 0.511  |
| 0    | 42.67 | 42.33 | 27.46 | 1.27 | 5.58 | 100.04 | 0.395 | 0.210 | 0.145 | 0.093 | 0.820  |
| 250  | 42.59 | 42.24 | 30.78 | 1.16 | 4.70 | 100.49 | 0.362 | 0.177 | 0.130 | 0.084 | 0.433  |
| 500  | 42.45 | 42.11 | 30.42 | 1.15 | 4.78 | 101.05 | 0.359 | 0.181 | 0.132 | 0.093 | 0.483  |
| 1000 | 42.50 | 42.13 | 31.27 | 1.18 | 4.66 | 101.01 | 0.367 | 0.176 | 0.129 | 0.074 | 0.434  |
| 2000 | 42.44 | 42.06 | 31.05 | 1.20 | 4.71 | 101.43 | 0.375 | 0.178 | 0.130 | 0.067 | 0.561  |
| 0    | 41.99 | 41.68 | 24.33 | 1.32 | 6.98 | 99.46  | 0.419 | 0.267 | 0.163 | 0.076 | 0.277  |
| 250  | 41.87 | 41.56 | 26.56 | 1.20 | 6.08 | 97.04  | 0.380 | 0.233 | 0.145 | 0.061 | 0.168  |
| 500  | 41.76 | 41.44 | 26.08 | 1.23 | 6.33 | 96.82  | 0.390 | 0.243 | 0.148 | 0.065 | 0.194  |
| 1000 | 41.79 | 41.45 | 26.70 | 1.24 | 6.17 | 96.49  | 0.394 | 0.237 | 0.144 | 0.056 | 0.173  |
| 2000 | 41.74 | 41.38 | 26.47 | 1.27 | 6.30 | 96.45  | 0.405 | 0.242 | 0.145 | 0.052 | 0.250  |

|      |    |       |       |       |      |      |        |       |       |       |       |       |
|------|----|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 62 | 42.56 | 42.22 | 25.34 | 1.40 | 6.52 | 104.11 | 0.446 | 0.249 | 0.164 | 0.093 | 0.593 |
| 250  |    | 42.54 | 41.93 | 27.55 | 1.35 | 6.05 | 105.80 | 0.436 | 0.230 | 0.153 | 0.085 | 0.528 |
| 500  |    | 42.17 | 41.74 | 27.01 | 1.43 | 6.33 | 107.41 | 0.449 | 0.242 | 0.158 | 0.095 | 0.569 |
| 1000 |    | 42.20 | 41.73 | 27.60 | 1.47 | 6.24 | 107.17 | 0.463 | 0.236 | 0.155 | 0.076 | 0.529 |
| 2000 |    | 42.10 | 41.60 | 27.36 | 1.53 | 6.40 | 108.50 | 0.463 | 0.245 | 0.150 | 0.071 | 0.420 |
| 0    | 63 | 42.32 | 42.01 | 25.80 | 1.35 | 6.72 | 115.15 | 0.424 | 0.255 | 0.179 | 0.073 | 0.216 |
| 250  |    | 42.12 | 41.78 | 28.96 | 1.29 | 5.96 | 123.70 | 0.406 | 0.227 | 0.172 | 0.070 | 0.175 |
| 500  |    | 41.97 | 41.62 | 28.56 | 1.32 | 6.20 | 129.69 | 0.418 | 0.237 | 0.181 | 0.076 | 0.200 |
| 1000 |    | 41.98 | 41.60 | 29.32 | 1.36 | 6.12 | 131.50 | 0.431 | 0.234 | 0.178 | 0.059 | 0.174 |
| 2000 |    | 41.00 | 41.46 | 29.13 | 1.44 | 6.29 | 134.93 | 0.455 | 0.242 | 0.184 | 0.062 | 0.246 |
| 0    | 64 | 42.69 | 42.34 | 27.60 | 1.29 | 5.65 | 102.50 | 0.402 | 0.212 | 0.148 | 0.085 | 0.257 |
| 250  |    | 42.51 | 42.14 | 30.57 | 1.23 | 4.98 | 107.27 | 0.383 | 0.188 | 0.140 | 0.072 | 0.175 |
| 500  |    | 42.35 | 41.98 | 30.10 | 1.24 | 5.15 | 109.20 | 0.388 | 0.195 | 0.144 | 0.074 | 0.204 |
| 1000 |    | 42.37 | 41.97 | 30.82 | 1.29 | 5.07 | 109.71 | 0.403 | 0.192 | 0.142 | 0.062 | 0.184 |
| 2000 |    | 42.27 | 41.83 | 30.57 | 1.35 | 5.19 | 111.34 | 0.423 | 0.198 | 0.145 | 0.067 | 0.268 |
| 0    | 65 | 42.59 | 42.29 | 26.67 | 1.26 | 6.23 | 112.52 | 0.393 | 0.234 | 0.168 | 0.129 | 1.964 |
| 250  |    | 42.42 | 42.08 | 29.84 | 1.24 | 5.57 | 119.64 | 0.309 | 0.211 | 0.160 | 0.135 | 2.540 |
| 500  |    | 42.26 | 41.91 | 29.20 | 1.27 | 5.79 | 121.35 | 0.400 | 0.220 | 0.165 | 0.154 | 3.620 |
| 1000 |    | 42.27 | 41.88 | 29.87 | 1.32 | 5.70 | 122.00 | 0.415 | 0.217 | 0.163 | 0.171 | 4.020 |
| 2000 |    | 42.16 | 41.73 | 29.75 | 1.40 | 5.85 | 124.50 | 0.441 | 0.223 | 0.167 | 0.225 | 6.300 |
| 0    | 66 | 41.82 | 41.43 | 26.55 | 1.42 | 6.01 | 106.78 | 0.451 | 0.231 | 0.160 | 0.104 | 0.381 |
| 250  |    | 41.59 | 41.18 | 29.40 | 1.35 | 5.35 | 110.98 | 0.431 | 0.207 | 0.150 | 0.086 | 0.233 |
| 500  |    | 41.41 | 41.00 | 28.78 | 1.37 | 5.54 | 112.37 | 0.438 | 0.215 | 0.155 | 0.098 | 0.252 |
| 1000 |    | 41.43 | 40.98 | 29.62 | 1.43 | 5.48 | 113.64 | 0.457 | 0.213 | 0.153 | 0.068 | 0.226 |
| 2000 |    | 41.31 | 40.82 | 29.21 | 1.50 | 5.62 | 114.20 | 0.481 | 0.219 | 0.156 | 0.061 | 0.324 |
| 0    | 67 | 42.19 | 41.85 | 26.50 | 1.34 | 6.08 | 105.02 | 0.421 | 0.231 | 0.158 | 0.098 | 0.563 |
| 250  |    | 42.02 | 41.67 | 29.40 | 1.24 | 5.27 | 106.45 | 0.393 | 0.201 | 0.144 | 0.078 | 0.302 |
| 500  |    | 41.87 | 41.52 | 28.86 | 1.25 | 5.43 | 107.21 | 0.396 | 0.208 | 0.148 | 0.093 | 0.403 |
| 1000 |    | 41.89 | 41.50 | 29.69 | 1.30 | 5.32 | 107.94 | 0.412 | 0.204 | 0.145 | 0.086 | 0.428 |
| 2000 |    | 41.73 | 41.35 | 29.47 | 1.37 | 5.44 | 109.10 | 0.434 | 0.209 | 0.147 | 0.087 | 0.558 |
| 0    | 68 | 42.61 | 42.29 | 27.16 | 1.33 | 5.98 | 105.69 | 0.414 | 0.225 | 0.155 | 0.079 | 0.356 |
| 250  |    | 42.46 | 42.10 | 30.09 | 1.24 | 5.31 | 111.73 | 0.388 | 0.201 | 0.148 | 0.069 | 0.184 |
| 500  |    | 42.32 | 41.96 | 29.47 | 1.25 | 5.51 | 113.48 | 0.392 | 0.209 | 0.153 | 0.074 | 0.212 |
| 1000 |    | 42.35 | 41.97 | 30.36 | 1.29 | 5.41 | 114.74 | 0.403 | 0.205 | 0.150 | 0.059 | 0.194 |
| 2000 |    | 42.23 | 41.88 | 30.09 | 1.33 | 5.51 | 116.18 | 0.416 | 0.210 | 0.154 | 0.060 | 0.304 |
| 0    | 69 | 42.55 | 42.19 | 25.02 | 1.42 | 6.85 | 103.85 | 0.444 | 0.259 | 0.165 | 0.080 | 0.508 |
| 250  |    | 42.31 | 41.94 | 27.67 | 1.34 | 6.01 | 105.37 | 0.420 | 0.228 | 0.152 | 0.074 | 0.190 |
| 500  |    | 42.16 | 41.77 | 27.08 | 1.36 | 6.22 | 105.47 | 0.429 | 0.237 | 0.155 | 0.084 | 0.226 |
| 1000 |    | 42.18 | 41.75 | 27.87 | 1.40 | 6.10 | 106.20 | 0.441 | 0.232 | 0.152 | 0.065 | 0.205 |
| 2000 |    | 42.03 | 41.63 | 27.59 | 1.45 | 6.21 | 106.27 | 0.456 | 0.230 | 0.153 | 0.062 | 0.335 |
| 0    | 70 | 42.29 | 41.97 | 27.14 | 1.27 | 5.73 | 102.79 | 0.398 | 0.217 | 0.151 | 0.085 | 0.494 |
| 250  |    | 42.12 | 41.78 | 30.09 | 1.20 | 5.06 | 107.96 | 0.379 | 0.193 | 0.143 | 0.069 | 0.241 |
| 500  |    | 41.97 | 41.62 | 29.42 | 1.22 | 5.24 | 109.37 | 0.386 | 0.200 | 0.148 | 0.076 | 0.266 |
| 1000 |    | 41.99 | 41.61 | 29.96 | 1.26 | 5.15 | 109.11 | 0.400 | 0.197 | 0.145 | 0.059 | 0.231 |
| 2000 |    | 41.89 | 41.47 | 30.07 | 1.33 | 5.27 | 111.88 | 0.422 | 0.202 | 0.148 | 0.056 | 0.331 |

|      |       |       |       |      |      |        |       |       |       |       |        |
|------|-------|-------|-------|------|------|--------|-------|-------|-------|-------|--------|
| 0    | 42.46 | 42.48 | 42.49 | 1.41 | 6.40 | 103.10 | 0.430 | 0.297 | 0.167 | 0.139 | 1.419  |
| 250  | 42.46 | 41.93 | 26.95 | 1.41 | 6.40 | 102.42 | 0.430 | 0.297 | 0.159 | 0.117 | 1.457  |
| 500  | 42.17 | 41.72 | 26.11 | 1.41 | 6.41 | 102.49 | 0.430 | 0.296 | 0.164 | 0.131 | 1.539  |
| 1000 | 42.18 | 41.69 | 26.74 | 1.54 | 6.60 | 107.46 | 0.485 | 0.252 | 0.160 | 0.112 | 1.490  |
| 2000 | 42.05 | 41.52 | 26.51 | 1.62 | 6.77 | 108.68 | 0.511 | 0.260 | 0.163 | 0.110 | 1.966  |
| 0    | 42.55 | 42.05 | 22.07 | 1.91 | 9.71 | 124.23 | 0.595 | 0.367 | 0.234 | 0.084 | 0.340  |
| 250  | 42.31 | 41.76 | 24.00 | 1.88 | 9.27 | 130.15 | 0.589 | 0.353 | 0.216 | 0.087 | 0.308  |
| 500  | 42.17 | 41.54 | 23.40 | 1.95 | 9.79 | 133.00 | 0.613 | 0.335 | 0.226 | 0.110 | 0.361  |
| 1000 | 42.15 | 41.54 | 23.85 | 1.98 | 9.63 | 133.73 | 0.624 | 0.369 | 0.223 | 0.075 | 0.334  |
| 2000 | 42.05 | 41.40 | 23.81 | 2.07 | 9.39 | 137.00 | 0.652 | 0.330 | 0.229 | 0.065 | 0.503  |
| 0    | 42.05 | 41.71 | 26.33 | 1.36 | 6.25 | 109.04 | 0.431 | 0.238 | 0.165 | 0.101 | 3.180  |
| 250  | 41.87 | 41.51 | 29.70 | 1.25 | 5.38 | 113.86 | 0.397 | 0.206 | 0.153 | 0.096 | 1.295  |
| 500  | 41.72 | 41.36 | 29.37 | 1.27 | 5.55 | 116.30 | 0.405 | 0.214 | 0.158 | 0.104 | 2.307  |
| 1000 | 41.73 | 41.33 | 30.03 | 1.32 | 5.47 | 116.63 | 0.419 | 0.211 | 0.155 | 0.122 | 0.275  |
| 2000 | 41.65 | 41.21 | 29.97 | 1.39 | 5.54 | 117.66 | 0.444 | 0.214 | 0.156 | 0.096 | 1.098  |
| 0    | 42.41 | 42.15 | 26.64 | 1.18 | 6.00 | 104.96 | 0.368 | 0.227 | 0.157 | 0.117 | 0.580  |
| 250  | 42.31 | 42.05 | 29.95 | 1.05 | 5.05 | 106.99 | 0.329 | 0.191 | 0.142 | 0.075 | 0.268  |
| 500  | 42.21 | 41.94 | 29.53 | 1.06 | 5.19 | 107.79 | 0.333 | 0.197 | 0.145 | 0.082 | 0.282  |
| 1000 | 42.22 | 41.94 | 30.16 | 1.07 | 5.08 | 107.57 | 0.338 | 0.193 | 0.142 | 0.072 | 0.249  |
| 2000 | 42.20 | 41.89 | 30.03 | 1.11 | 5.12 | 107.97 | 0.349 | 0.195 | 0.143 | 0.074 | 0.372  |
| 0    | 42.30 | 41.92 | 24.39 | 1.48 | 7.03 | 102.22 | 0.465 | 0.267 | 0.167 | 0.095 | 0.530  |
| 250  | 42.14 | 41.74 | 27.31 | 1.38 | 6.10 | 105.23 | 0.434 | 0.233 | 0.153 | 0.106 | 0.372  |
| 500  | 42.00 | 41.59 | 26.95 | 1.40 | 6.27 | 106.03 | 0.442 | 0.240 | 0.157 | 0.128 | 0.418  |
| 1000 | 42.01 | 41.56 | 27.57 | 1.43 | 6.17 | 106.49 | 0.453 | 0.236 | 0.154 | 0.093 | 0.379  |
| 2000 | 41.96 | 41.48 | 27.39 | 1.49 | 6.23 | 106.08 | 0.472 | 0.239 | 0.154 | 0.085 | 0.578  |
| 0    | 42.15 | 41.76 | 25.45 | 1.47 | 6.47 | 102.91 | 0.464 | 0.247 | 0.161 | 0.096 | 0.430  |
| 250  | 41.96 | 41.53 | 27.71 | 1.42 | 5.83 | 103.36 | 0.448 | 0.223 | 0.148 | 0.102 | 0.393  |
| 500  | 41.81 | 41.37 | 27.30 | 1.45 | 6.03 | 104.42 | 0.459 | 0.232 | 0.152 | 0.115 | 0.412  |
| 1000 | 41.82 | 41.34 | 27.83 | 1.49 | 5.97 | 104.86 | 0.471 | 0.230 | 0.150 | 0.092 | 0.353  |
| 2000 | 41.77 | 41.26 | 27.69 | 1.54 | 6.04 | 104.75 | 0.489 | 0.233 | 0.151 | 0.095 | 0.531  |
| 0    | 42.69 | 42.38 | 25.51 | 1.29 | 6.60 | 103.92 | 0.401 | 0.246 | 0.162 | 0.442 | 14.850 |
| 250  | 42.54 | 42.17 | 28.05 | 1.30 | 5.99 | 106.74 | 0.406 | 0.226 | 0.151 | 0.308 | 8.620  |
| 500  | 42.42 | 42.04 | 28.31 | 1.33 | 6.22 | 130.28 | 0.416 | 0.236 | 0.163 | 0.352 | 11.480 |
| 1000 | 42.42 | 42.02 | 27.94 | 1.36 | 6.17 | 107.58 | 0.426 | 0.234 | 0.153 | 0.429 | 11.810 |
| 2000 | 42.37 | 41.93 | 27.79 | 1.42 | 6.29 | 108.25 | 0.445 | 0.239 | 0.155 | 0.547 | 18.110 |
| 0    | 42.53 | 42.21 | 26.80 | 1.29 | 5.87 | 103.42 | 0.403 | 0.221 | 0.154 | 0.085 | 0.280  |
| 250  | 42.35 | 42.02 | 29.82 | 1.18 | 5.25 | 112.14 | 0.371 | 0.199 | 0.150 | 0.077 | 0.182  |
| 500  | 42.24 | 41.90 | 29.42 | 1.21 | 5.45 | 114.91 | 0.380 | 0.207 | 0.153 | 0.080 | 0.191  |
| 1000 | 42.24 | 41.88 | 29.96 | 1.24 | 5.41 | 116.08 | 0.390 | 0.206 | 0.154 | 0.065 | 0.173  |
| 2000 | 42.19 | 41.81 | 29.68 | 1.29 | 5.50 | 111.70 | 0.404 | 0.209 | 0.156 | 0.066 | 0.286  |
| 0    | 42.48 | 42.22 | 26.76 | 1.38 | 5.99 | 102.85 | 0.430 | 0.226 | 0.153 | 0.081 | 0.149  |
| 250  | 42.38 | 42.01 | 29.85 | 1.25 | 5.21 | 107.25 | 0.393 | 0.197 | 0.143 | 0.087 | 0.214  |
| 500  | 42.24 | 41.86 | 29.53 | 1.28 | 5.35 | 109.09 | 0.401 | 0.203 | 0.147 | 0.097 | 0.241  |
| 1000 | 42.21 | 41.81 | 30.10 | 1.33 | 5.30 | 109.59 | 0.419 | 0.202 | 0.145 | 0.074 | 0.219  |
| 2000 | 42.13 | 41.66 | 29.93 | 1.42 | 5.39 | 110.27 | 0.446 | 0.206 | 0.147 | 0.105 | 0.375  |

|      |       |       |       |      |      |        |       |       |       |       |       |
|------|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 41.05 | 44.67 | 27.30 | 1.37 | 6.53 | 111.36 | 0.405 | 0.233 | 0.162 | 0.167 | 1.159 |
| 250  | 41.92 | 44.54 | 31.10 | 1.30 | 5.70 | 112.57 | 0.404 | 0.231 | 0.157 | 0.161 | 0.617 |
| 500  | 44.79 | 44.41 | 30.83 | 1.31 | 5.84 | 115.43 | 0.389 | 0.209 | 0.162 | 0.141 | 0.655 |
| 1000 | 44.80 | 44.40 | 31.56 | 1.33 | 5.76 | 116.66 | 0.395 | 0.207 | 0.160 | 0.093 | 0.551 |
| 2000 | 44.75 | 44.32 | 31.40 | 1.32 | 5.62 | 117.09 | 0.402 | 0.202 | 0.161 | 0.082 | 0.897 |
| 0    | 42.16 | 41.80 | 25.33 | 1.30 | 6.39 | 97.06  | 0.436 | 0.243 | 0.156 | 0.080 | 0.238 |
| 250  | 41.92 | 41.54 | 27.45 | 1.31 | 5.77 | 98.67  | 0.413 | 0.221 | 0.143 | 0.072 | 1.171 |
| 500  | 41.78 | 41.38 | 26.89 | 1.35 | 5.98 | 98.40  | 0.427 | 0.230 | 0.146 | 0.008 | 0.184 |
| 1000 | 41.77 | 41.33 | 27.26 | 1.39 | 5.92 | 98.02  | 0.442 | 0.228 | 0.143 | 0.069 | 0.186 |
| 2000 | 41.67 | 41.19 | 27.15 | 1.46 | 6.03 | 98.41  | 0.466 | 0.233 | 0.144 | 0.079 | 0.239 |
| 0    | 44.27 | 43.88 | 24.98 | 1.46 | 7.34 | 105.75 | 0.439 | 0.266 | 0.169 | 0.162 | 2.980 |
| 250  | 44.13 | 43.70 | 27.51 | 1.46 | 6.73 | 111.26 | 0.438 | 0.245 | 0.161 | 0.112 | 1.533 |
| 500  | 44.00 | 43.56 | 26.98 | 1.49 | 7.04 | 112.78 | 0.449 | 0.257 | 0.166 | 0.127 | 1.740 |
| 1000 | 44.02 | 43.55 | 27.46 | 1.52 | 6.97 | 113.05 | 0.458 | 0.255 | 0.164 | 0.112 | 1.805 |
| 2000 | 43.97 | 43.47 | 27.27 | 1.57 | 7.13 | 113.90 | 0.473 | 0.261 | 0.166 | 0.116 | 2.120 |
| 0    | 45.22 | 44.89 | 28.15 | 1.28 | 6.20 | 107.44 | 0.374 | 0.220 | 0.152 | 0.092 | 0.304 |
| 250  | 45.11 | 44.78 | 31.86 | 1.18 | 5.32 | 116.70 | 0.346 | 0.189 | 0.146 | 0.068 | 0.207 |
| 500  | 44.99 | 44.68 | 31.48 | 1.17 | 5.42 | 118.74 | 0.345 | 0.193 | 0.150 | 0.085 | 0.220 |
| 1000 | 45.02 | 44.69 | 32.31 | 1.18 | 5.31 | 119.79 | 0.349 | 0.187 | 0.148 | 0.066 | 0.195 |
| 2000 | 44.99 | 44.63 | 32.31 | 1.21 | 5.35 | 121.33 | 0.356 | 0.191 | 0.149 | 0.061 | 0.296 |
| 0    | 42.47 | 42.13 | 26.78 | 1.32 | 6.06 | 106.55 | 0.412 | 0.229 | 0.158 | 0.103 | 0.648 |
| 250  | 42.34 | 42.00 | 30.28 | 1.21 | 5.23 | 113.27 | 0.380 | 0.198 | 0.149 | 0.080 | 0.380 |
| 500  | 42.21 | 41.87 | 29.77 | 1.22 | 5.40 | 115.46 | 0.385 | 0.205 | 0.154 | 0.099 | 0.436 |
| 1000 | 42.23 | 41.86 | 30.59 | 1.25 | 5.32 | 116.57 | 0.394 | 0.202 | 0.152 | 0.074 | 0.403 |
| 2000 | 42.18 | 41.78 | 30.44 | 1.30 | 5.43 | 118.32 | 0.410 | 0.207 | 0.155 | 0.078 | 0.617 |
| 0    | 42.70 | 42.34 | 25.63 | 1.40 | 6.55 | 103.28 | 0.435 | 0.246 | 0.160 | 0.111 | 0.673 |
| 250  | 42.50 | 42.10 | 28.08 | 1.35 | 5.87 | 105.90 | 0.421 | 0.232 | 0.156 | 0.087 | 0.388 |
| 500  | 42.35 | 41.95 | 27.54 | 1.38 | 6.10 | 107.16 | 0.431 | 0.232 | 0.155 | 0.096 | 0.430 |
| 1000 | 42.37 | 41.93 | 28.08 | 1.42 | 6.02 | 107.33 | 0.443 | 0.229 | 0.152 | 0.080 | 0.380 |
| 2000 | 42.31 | 41.84 | 27.87 | 1.47 | 6.14 | 107.81 | 0.460 | 0.234 | 0.154 | 0.082 | 0.553 |
| 0    | 43.22 | 42.87 | 25.55 | 1.41 | 6.78 | 104.89 | 0.433 | 0.252 | 0.163 | 0.078 | 0.226 |
| 250  | 43.04 | 42.67 | 28.34 | 1.36 | 6.03 | 107.95 | 0.402 | 0.225 | 0.152 | 0.071 | 0.175 |
| 500  | 42.90 | 42.53 | 27.02 | 1.33 | 5.28 | 108.98 | 0.412 | 0.235 | 0.156 | 0.081 | 0.191 |
| 1000 | 42.92 | 42.51 | 28.34 | 1.37 | 6.20 | 108.94 | 0.423 | 0.232 | 0.153 | 0.063 | 0.166 |
| 2000 | 42.85 | 42.40 | 28.21 | 1.43 | 6.36 | 110.33 | 0.443 | 0.239 | 0.156 | 0.067 | 0.241 |
| 0    | 43.20 | 42.85 | 27.60 | 1.34 | 5.86 | 106.24 | 0.411 | 0.218 | 0.153 | 0.101 | 0.415 |
| 250  | 43.01 | 42.63 | 30.66 | 1.27 | 5.28 | 116.03 | 0.392 | 0.197 | 0.150 | 0.084 | 0.233 |
| 500  | 42.85 | 42.47 | 30.24 | 1.29 | 5.48 | 118.47 | 0.400 | 0.206 | 0.156 | 0.091 | 0.250 |
| 1000 | 42.86 | 42.45 | 30.89 | 1.34 | 5.45 | 120.02 | 0.416 | 0.204 | 0.155 | 0.067 | 0.211 |
| 2000 | 42.77 | 42.32 | 30.68 | 1.41 | 5.58 | 121.64 | 0.438 | 0.210 | 0.158 | 0.072 | 0.312 |
| 0    | 42.69 | 42.37 | 26.54 | 1.35 | 6.38 | 115.81 | 0.418 | 0.240 | 0.174 | 0.083 | 0.320 |
| 250  | 42.50 | 42.10 | 29.84 | 1.25 | 5.70 | 126.54 | 0.390 | 0.215 | 0.169 | 0.073 | 0.208 |
| 500  | 42.37 | 42.04 | 29.28 | 1.27 | 5.94 | 129.74 | 0.398 | 0.225 | 0.176 | 0.079 | 0.213 |
| 1000 | 42.36 | 42.03 | 29.99 | 1.31 | 5.87 | 131.64 | 0.409 | 0.222 | 0.175 | 0.062 | 0.189 |
| 2000 | 42.31 | 41.93 | 29.99 | 1.37 | 6.01 | 135.28 | 0.428 | 0.228 | 0.179 | 0.069 | 0.270 |

|      |    |       |       |       |      |      |        |       |       |       |       |       |
|------|----|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 32 | 42.54 | 42.42 | 26.54 | 1.13 | 6.80 | 103.80 | 0.395 | 0.203 | 0.176 | 0.125 | 1.538 |
| 250  |    | 42.62 | 42.13 | 29.55 | 1.13 | 6.13 | 103.80 | 0.391 | 0.170 | 0.142 | 0.091 | 0.730 |
| 500  |    | 42.30 | 42.01 | 29.05 | 1.12 | 5.36 | 103.82 | 0.381 | 0.203 | 0.145 | 0.096 | 0.818 |
| 1000 |    | 42.51 | 41.89 | 29.55 | 1.11 | 5.25 | 103.59 | 0.359 | 0.179 | 0.142 | 0.091 | 0.746 |
| 2000 |    | 42.55 | 41.90 | 29.51 | 1.10 | 5.35 | 102.73 | 0.395 | 0.203 | 0.144 | 0.098 | 1.129 |
| 0    | 30 | 43.23 | 43.50 | 24.81 | 1.15 | 7.35 | 102.81 | 0.418 | 0.245 | 0.173 | 0.074 | 0.264 |
| 250  |    | 43.62 | 43.32 | 27.30 | 1.30 | 6.73 | 113.82 | 0.417 | 0.247 | 0.166 | 0.074 | 0.199 |
| 500  |    | 43.55 | 43.15 | 26.70 | 1.32 | 7.05 | 115.02 | 0.413 | 0.260 | 0.171 | 0.085 | 0.214 |
| 1000 |    | 43.51 | 43.13 | 27.35 | 1.45 | 6.94 | 115.81 | 0.415 | 0.256 | 0.169 | 0.084 | 0.192 |
| 2000 |    | 43.47 | 43.02 | 27.22 | 1.51 | 7.09 | 117.10 | 0.461 | 0.262 | 0.171 | 0.062 | 0.261 |
| 0    | 31 | 44.20 | 43.95 | 27.75 | 1.27 | 6.00 | 106.19 | 0.379 | 0.217 | 0.152 | 0.121 | 1.022 |
| 250  |    | 44.16 | 43.83 | 31.44 | 1.10 | 5.13 | 113.55 | 0.354 | 0.186 | 0.144 | 0.099 | 1.065 |
| 500  |    | 44.03 | 43.71 | 31.01 | 1.18 | 5.25 | 115.86 | 0.354 | 0.191 | 0.149 | 0.133 | 1.557 |
| 1000 |    | 44.07 | 43.72 | 31.87 | 1.19 | 5.14 | 116.81 | 0.359 | 0.187 | 0.146 | 0.112 | 1.715 |
| 2000 |    | 44.04 | 43.67 | 31.90 | 1.22 | 5.19 | 117.89 | 0.367 | 0.189 | 0.147 | 0.139 | 2.980 |
| 0    | 32 | 45.20 | 44.01 | 26.07 | 1.44 | 6.83 | 103.79 | 0.423 | 0.243 | 0.158 | 0.088 | 0.664 |
| 250  |    | 45.05 | 44.62 | 28.97 | 1.40 | 6.19 | 110.75 | 0.411 | 0.221 | 0.152 | 0.079 | 0.395 |
| 500  |    | 44.89 | 44.45 | 28.12 | 1.44 | 6.50 | 111.76 | 0.426 | 0.233 | 0.158 | 0.081 | 0.420 |
| 1000 |    | 44.91 | 44.43 | 28.85 | 1.48 | 6.44 | 113.14 | 0.438 | 0.231 | 0.156 | 0.072 | 0.468 |
| 2000 |    | 44.83 | 44.31 | 28.64 | 1.55 | 6.62 | 114.60 | 0.460 | 0.238 | 0.159 | 0.071 | 0.487 |
| 0    | 33 | 42.60 | 42.38 | 24.91 | 1.37 | 7.17 | 120.49 | 0.427 | 0.269 | 0.192 | 0.079 | 0.393 |
| 250  |    | 42.53 | 42.21 | 20.40 | 1.30 | 6.23 | 129.39 | 0.404 | 0.235 | 0.181 | 0.071 | 0.334 |
| 500  |    | 42.40 | 42.06 | 27.90 | 1.33 | 6.45 | 131.71 | 0.415 | 0.244 | 0.188 | 0.075 | 0.378 |
| 1000 |    | 42.41 | 42.04 | 28.60 | 1.36 | 6.34 | 133.09 | 0.425 | 0.240 | 0.185 | 0.066 | 0.349 |
| 2000 |    | 42.32 | 41.92 | 28.61 | 1.42 | 6.47 | 135.49 | 0.446 | 0.246 | 0.188 | 0.087 | 0.501 |
| 0    | 34 | 42.01 | 41.67 | 26.59 | 1.32 | 5.98 | 103.89 | 0.418 | 0.229 | 0.155 | 0.078 | 0.643 |
| 250  |    | 41.87 | 41.51 | 29.40 | 1.25 | 5.22 | 106.10 | 0.395 | 0.200 | 0.143 | 0.084 | 0.353 |
| 500  |    | 41.72 | 41.36 | 29.00 | 1.26 | 5.39 | 107.56 | 0.401 | 0.208 | 0.148 | 0.072 | 0.399 |
| 1000 |    | 41.74 | 41.34 | 29.61 | 1.31 | 5.31 | 107.64 | 0.415 | 0.204 | 0.145 | 0.071 | 0.359 |
| 2000 |    | 41.65 | 41.21 | 29.49 | 1.37 | 5.42 | 109.00 | 0.437 | 0.209 | 0.147 | 0.076 | 0.589 |
| 0    | 35 | 43.08 | 42.74 | 25.87 | 1.37 | 6.59 | 105.21 | 0.422 | 0.245 | 0.162 | 0.083 | 0.459 |
| 250  |    | 42.89 | 42.51 | 28.21 | 1.34 | 5.99 | 106.58 | 0.414 | 0.224 | 0.150 | 0.080 | 0.278 |
| 500  |    | 42.73 | 42.33 | 27.60 | 1.39 | 6.30 | 108.31 | 0.430 | 0.237 | 0.156 | 0.111 | 1.064 |
| 1000 |    | 42.73 | 42.29 | 28.14 | 1.44 | 6.24 | 109.16 | 0.448 | 0.235 | 0.154 | 0.137 | 2.580 |
| 2000 |    | 42.73 | 42.29 | 28.14 | 1.44 | 6.24 | 109.16 | 0.448 | 0.235 | 0.154 | 0.137 | 2.580 |
| 0    | 36 | 42.06 | 41.79 | 24.64 | 1.36 | 7.63 | 130.54 | 0.428 | 0.291 | 0.211 | 0.142 | 3.200 |
| 250  |    | 41.95 | 41.66 | 27.52 | 1.30 | 6.76 | 139.03 | 0.413 | 0.258 | 0.201 | 0.132 | 2.480 |
| 500  |    | 41.83 | 41.53 | 26.91 | 1.34 | 7.08 | 142.34 | 0.425 | 0.272 | 0.210 | 0.144 | 3.430 |
| 1000 |    | 41.85 | 41.53 | 27.64 | 1.36 | 6.95 | 144.07 | 0.432 | 0.266 | 0.207 | 0.162 | 3.710 |
| 2000 |    | 41.61 | 41.45 | 27.55 | 1.41 | 7.07 | 146.16 | 0.446 | 0.272 | 0.211 | 0.215 | 6.050 |

\*\*\* SPRAGUE ELECTRIC SURGE CURRENT TEST PROGRAM \*\*\*

--- SURGE CURRENT SCREENED UNITS ---

11/14/79

11F ISI -- 125C.33VOLTS

| HOURS | UNIT NO. | CAPACITANCE (uF)--- |       |       | DISSIPATION FACTOR (Z)--- |      |        | ESR (OHMS)--- |       |       | ---DCI (uA)--- |       | FUSE-MDN |
|-------|----------|---------------------|-------|-------|---------------------------|------|--------|---------------|-------|-------|----------------|-------|----------|
|       |          | 120Hz               | 1KHz  | 40KHz | 120Hz                     | 1KHz | 40KHz  | 120Hz         | 1KHz  | 40KHz | 25C            | 85C   |          |
| 0     | 1        | 41.27               | 40.94 | 22.07 | 1.47                      | 8.48 | 107.59 | 0.473         | 0.377 | 0.194 | 0.090          | 0.282 |          |
| 250   |          | 41.07               | 40.70 | 23.52 | 1.48                      | 7.84 | 110.50 | 0.480         | 0.306 | 0.187 | 0.086          | 0.167 |          |
| 500   |          | 41.00               | 40.60 | 23.41 | 1.52                      | 7.95 | 111.15 | 0.491         | 0.312 | 0.189 | 0.057          | 0.192 |          |
| 1000  |          | 40.91               | 40.48 | 23.46 | 1.58                      | 8.16 | 113.55 | 0.513         | 0.321 | 0.193 | 0.060          | 0.162 |          |
| 2000  | 2        | 40.81               | 40.34 | 23.45 | 1.65                      | 8.36 | 115.52 | 0.537         | 0.330 | 0.196 | 0.062          | 0.202 |          |
| 0     |          | 41.29               | 40.99 | 23.78 | 1.29                      | 6.81 | 100.24 | 0.415         | 0.264 | 0.168 | 0.144          | 1.509 |          |
| 250   |          | 41.03               | 40.66 | 25.60 | 1.36                      | 6.36 | 105.11 | 0.439         | 0.249 | 0.163 | 0.107          | 1.051 |          |
| 500   |          | 40.91               | 40.52 | 24.98 | 1.40                      | 6.50 | 104.02 | 0.453         | 0.255 | 0.166 | 0.094          | 1.286 |          |
| 1000  | 3        | 40.79               | 40.36 | 25.20 | 1.49                      | 6.66 | 107.56 | 0.483         | 0.263 | 0.170 | 0.098          | 1.506 |          |
| 2000  |          | 40.63               | 40.14 | 25.01 | 1.58                      | 6.86 | 109.65 | 0.515         | 0.272 | 0.174 | 0.192          | 2.080 |          |
| 0     |          | 41.66               | 41.31 | 23.19 | 1.45                      | 7.64 | 106.27 | 0.462         | 0.294 | 0.182 | 0.103          | 0.972 |          |
| 250   |          | 41.48               | 41.09 | 25.23 | 1.47                      | 7.09 | 113.21 | 0.470         | 0.275 | 0.179 | 0.090          | 0.673 |          |
| 500   | 4        | 41.37               | 40.97 | 24.90 | 1.50                      | 7.24 | 113.81 | 0.480         | 0.281 | 0.182 | 0.076          | 0.814 |          |
| 1000  |          | 41.29               | 40.85 | 25.33 | 1.58                      | 7.48 | 120.70 | 0.506         | 0.291 | 0.190 | 0.075          | 0.931 |          |
| 2000  |          | 41.18               | 40.71 | 25.33 | 1.66                      | 7.88 | 131.32 | 0.536         | 0.308 | 0.206 | 0.085          | 1.536 |          |
| 0     |          | 40.29               | 40.00 | 23.72 | 1.33                      | 6.88 | 109.08 | 0.437         | 0.274 | 0.183 | 0.100          | 0.339 |          |
| 250   | 5        | 40.16               | 39.85 | 25.75 | 1.31                      | 6.30 | 117.95 | 0.432         | 0.252 | 0.182 | 0.082          | 0.171 |          |
| 500   |          | 40.08               | 39.77 | 25.38 | 1.31                      | 6.43 | 119.75 | 0.435         | 0.257 | 0.188 | 0.059          | 0.192 |          |
| 1000  |          | 40.04               | 39.71 | 25.58 | 1.37                      | 6.64 | 126.58 | 0.453         | 0.266 | 0.197 | 0.057          | 0.194 |          |
| 2000  |          | 39.99               | 39.64 | 25.29 | 1.40                      | 6.86 | 130.27 | 0.466         | 0.275 | 0.205 | 0.064          | 0.222 |          |
| 0     | 6        | 40.98               | 40.67 | 24.47 | 1.33                      | 6.52 | 106.02 | 0.431         | 0.255 | 0.172 | 0.132          | 1.528 |          |
| 250   |          | 40.83               | 40.47 | 26.58 | 1.34                      | 5.92 | 111.06 | 0.434         | 0.233 | 0.166 | 0.108          | 0.991 |          |
| 500   |          | 40.73               | 40.37 | 26.22 | 1.34                      | 6.00 | 111.71 | 0.437         | 0.237 | 0.170 | 0.094          | 1.201 |          |
| 1000  |          | 40.66               | 40.27 | 26.52 | 1.40                      | 6.10 | 115.19 | 0.457         | 0.241 | 0.173 | 0.092          | 1.352 |          |
| 2000  | 7        | 40.54               | 40.12 | 26.37 | 1.46                      | 6.26 | 117.50 | 0.477         | 0.248 | 0.177 | 0.103          | 1.986 |          |
| 0     |          | 40.94               | 40.61 | 22.48 | 1.42                      | 7.76 | 102.42 | 0.461         | 0.304 | 0.181 | 0.084          | 0.393 |          |
| 250   |          | 40.78               | 40.41 | 24.33 | 1.43                      | 7.11 | 105.37 | 0.464         | 0.280 | 0.172 | 0.074          | 0.212 |          |
| 500   |          | 40.68               | 40.30 | 23.97 | 1.44                      | 7.27 | 105.63 | 0.471         | 0.287 | 0.175 | 0.058          | 0.232 |          |
| 1000  | 7        | 40.62               | 40.21 | 24.29 | 1.51                      | 7.44 | 110.16 | 0.493         | 0.294 | 0.180 | 0.057          | 0.245 |          |
| 2000  |          | 40.53               | 40.08 | 24.17 | 1.58                      | 7.71 | 115.32 | 0.518         | 0.306 | 0.190 | 0.067          | 0.372 |          |
| 0     |          | 40.07               | 39.73 | 22.12 | 1.52                      | 7.88 | 108.67 | 0.505         | 0.316 | 0.195 | 0.099          | 0.420 |          |
| 250   |          | 39.97               | 39.61 | 23.96 | 1.47                      | 7.00 | 113.39 | 0.487         | 0.281 | 0.188 | 0.079          | 0.208 |          |
| 500   | 7        | 39.87               | 39.52 | 23.68 | 1.46                      | 7.10 | 115.14 | 0.486         | 0.286 | 0.193 | 0.063          | 0.229 |          |
| 1000  |          | 39.84               | 39.47 | 23.94 | 1.49                      | 7.18 | 119.32 | 0.498         | 0.290 | 0.198 | 0.060          | 0.247 |          |
| 2000  |          | 39.78               | 39.39 | 23.77 | 1.53                      | 7.37 | 123.17 | 0.509         | 0.298 | 0.206 | 0.066          | 0.7   |          |



|      |    |       |       |       |      |      |        |       |       |       |       |       |
|------|----|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 8  | 40.63 | 40.30 | 22.51 | 1.47 | 7.69 | 100.51 | 0.464 | 0.304 | 0.178 | 0.081 | 0.267 |
| 250  |    | 40.48 | 40.10 | 24.16 | 1.43 | 7.06 | 101.45 | 0.469 | 0.280 | 0.167 | 0.072 | 0.182 |
| 500  |    | 40.38 | 39.99 | 23.78 | 1.44 | 7.20 | 100.99 | 0.475 | 0.286 | 0.169 | 0.057 | 0.187 |
| 1000 |    | 40.32 | 39.90 | 24.07 | 1.50 | 7.30 | 103.35 | 0.495 | 0.291 | 0.171 | 0.055 | 0.174 |
| 2000 |    | 40.22 | 39.77 | 23.86 | 1.56 | 7.45 | 103.71 | 0.515 | 0.298 | 0.173 | 0.058 | 0.220 |
| 0    | 9  | 40.74 | 40.42 | 22.88 | 1.40 | 7.42 | 103.62 | 0.457 | 0.292 | 0.180 | 0.078 | 0.274 |
| 250  |    | 40.57 | 40.18 | 24.61 | 1.44 | 6.81 | 105.57 | 0.470 | 0.270 | 0.170 | 0.076 | 0.206 |
| 500  |    | 40.44 | 40.04 | 24.27 | 1.46 | 6.94 | 105.12 | 0.478 | 0.276 | 0.172 | 0.059 | 0.209 |
| 1000 |    | 40.35 | 39.91 | 24.63 | 1.53 | 7.06 | 107.82 | 0.501 | 0.281 | 0.174 | 0.058 | 0.200 |
| 2000 |    | 40.21 | 39.73 | 24.41 | 1.61 | 7.23 | 108.47 | 0.531 | 0.290 | 0.177 | 0.064 | 0.244 |
| 0    | 10 | 41.79 | 41.47 | 24.18 | 1.42 | 7.30 | 119.78 | 0.452 | 0.280 | 0.197 | 0.090 | 0.102 |
| 250  |    | 41.59 | 41.20 | 26.74 | 1.51 | 7.09 | 140.46 | 0.481 | 0.274 | 0.209 | 0.074 | 0.145 |
| 500  |    | 41.46 | 41.07 | 26.27 | 1.54 | 7.35 | 144.29 | 0.493 | 0.285 | 0.219 | 0.059 | 0.167 |
| 1000 |    | 41.36 | 40.93 | 26.43 | 1.65 | 7.78 | 154.66 | 0.531 | 0.301 | 0.233 | 0.057 | 0.188 |
| 2000 |    | 41.19 | 40.70 | 26.05 | 1.79 | 8.23 | 162.95 | 0.577 | 0.322 | 0.249 | 0.064 | 0.234 |
| 0    | 11 | 40.50 | 40.14 | 21.47 | 1.54 | 8.32 | 101.26 | 0.503 | 0.330 | 0.188 | 0.079 | 0.279 |
| 250  |    | 40.37 | 39.97 | 23.33 | 1.51 | 7.41 | 102.21 | 0.497 | 0.295 | 0.174 | 0.071 | 0.164 |
| 500  |    | 40.27 | 39.86 | 22.94 | 1.52 | 7.51 | 101.08 | 0.501 | 0.300 | 0.175 | 0.058 | 0.181 |
| 1000 |    | 40.22 | 39.78 | 23.23 | 1.57 | 7.57 | 102.87 | 0.517 | 0.303 | 0.176 | 0.054 | 0.186 |
| 2000 |    | 40.14 | 39.68 | 23.13 | 1.61 | 7.69 | 103.57 | 0.531 | 0.309 | 0.178 | 0.060 | 0.230 |
| 0    | 12 | 39.70 | 39.37 | 22.79 | 1.41 | 6.96 | 102.61 | 0.472 | 0.282 | 0.179 | 0.096 | 0.460 |
| 250  |    | 39.51 | 39.11 | 24.63 | 1.49 | 6.59 | 112.98 | 0.500 | 0.268 | 0.183 | 0.082 | 0.296 |
| 500  |    | 39.37 | 38.95 | 24.20 | 1.52 | 6.77 | 114.98 | 0.513 | 0.277 | 0.189 | 0.063 | 0.346 |
| 1000 |    | 39.25 | 38.79 | 24.39 | 1.65 | 7.08 | 124.25 | 0.556 | 0.291 | 0.203 | 0.062 | 0.369 |
| 2000 |    | 39.05 | 38.55 | 23.12 | 1.83 | 7.96 | 137.15 | 0.620 | 0.329 | 0.236 | 0.070 | 0.556 |
| 0    | 13 | 42.06 | 41.78 | 25.50 | 1.19 | 6.21 | 98.53  | 0.376 | 0.237 | 0.154 | 0.092 | 0.267 |
| 250  |    | 41.86 | 41.52 | 27.52 | 1.25 | 5.78 | 103.31 | 0.395 | 0.222 | 0.149 | 0.065 | 0.135 |
| 500  |    | 41.75 | 41.40 | 27.05 | 1.27 | 5.94 | 104.16 | 0.404 | 0.228 | 0.153 | 0.052 | 0.159 |
| 1000 |    | 41.68 | 41.30 | 27.41 | 1.34 | 6.10 | 108.50 | 0.427 | 0.235 | 0.157 | 0.051 | 0.177 |
| 2000 |    | 41.57 | 41.15 | 27.13 | 1.41 | 6.29 | 110.17 | 0.450 | 0.243 | 0.162 | 0.055 | 0.302 |
| 0    | 14 | 40.51 | 40.21 | 23.74 | 1.32 | 6.87 | 103.02 | 0.432 | 0.272 | 0.173 | 0.074 | 0.264 |
| 250  |    | 40.37 | 40.02 | 25.70 | 1.33 | 6.27 | 108.36 | 0.437 | 0.249 | 0.168 | 0.067 | 0.209 |
| 500  |    | 40.25 | 39.90 | 25.28 | 1.36 | 6.42 | 110.26 | 0.449 | 0.256 | 0.174 | 0.054 | 0.260 |
| 1000 |    | 40.15 | 39.75 | 25.61 | 1.45 | 6.62 | 116.77 | 0.480 | 0.265 | 0.181 | 0.052 | 0.253 |
| 2000 |    | 39.97 | 39.53 | 25.30 | 1.55 | 6.82 | 119.00 | 0.513 | 0.274 | 0.187 | 0.057 | 0.276 |
| 0    | 15 | 41.14 | 40.85 | 24.77 | 1.29 | 6.49 | 104.88 | 0.416 | 0.253 | 0.168 | 0.138 | 2.296 |
| 250  |    | 40.94 | 40.71 | 27.31 | 1.27 | 5.85 | 112.58 | 0.412 | 0.229 | 0.164 | 0.114 | 1.685 |
| 500  |    | 40.95 | 40.61 | 26.96 | 1.29 | 6.00 | 115.20 | 0.417 | 0.235 | 0.176 | 0.110 | 2.420 |
| 1000 |    | 40.90 | 40.53 | 27.38 | 1.35 | 6.21 | 122.91 | 0.438 | 0.244 | 0.179 | 0.112 | 2.850 |
| 2000 |    | 40.82 | 40.42 | 27.11 | 1.42 | 6.53 | 129.56 | 0.463 | 0.257 | 0.190 | 0.136 | 7.780 |
| 0    | 16 | 41.63 | 41.71 | 22.94 | 1.37 | 7.48 | 99.70  | 0.437 | 0.288 | 0.173 | 0.079 | 0.259 |
| 250  |    | 41.41 | 41.03 | 24.63 | 1.42 | 6.88 | 103.72 | 0.454 | 0.267 | 0.168 | 0.066 | 0.135 |
| 500  |    | 41.29 | 40.89 | 24.22 | 1.45 | 7.04 | 104.09 | 0.465 | 0.274 | 0.171 | 0.052 | 0.154 |
| 1000 |    | 41.19 | 40.75 | 24.58 | 1.53 | 7.21 | 108.17 | 0.493 | 0.281 | 0.175 | 0.052 | 0.175 |
| 2000 |    | 41.04 | 40.55 | 24.32 | 1.62 | 7.39 | 109.27 | 0.524 | 0.290 | 0.179 | 0.056 | 0.346 |

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|      |    |       |       |       |      |      |        |       |       |       |       |       |
|------|----|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 17 | 40.96 | 40.68 | 23.94 | 1.26 | 6.68 | 107.14 | 0.416 | 0.262 | 0.178 | 0.080 | 0.282 |
| 250  |    | 40.84 | 40.52 | 26.21 | 1.27 | 6.03 | 113.71 | 0.412 | 0.237 | 0.173 | 0.063 | 0.139 |
| 500  |    | 40.74 | 40.43 | 25.83 | 1.28 | 6.21 | 116.10 | 0.417 | 0.244 | 0.179 | 0.051 | 0.154 |
| 1000 |    | 40.71 | 40.37 | 26.12 | 1.34 | 6.42 | 122.44 | 0.436 | 0.253 | 0.187 | 0.049 | 0.164 |
| 2000 |    | 40.64 | 40.20 | 25.76 | 1.39 | 6.70 | 125.90 | 0.453 | 0.265 | 0.194 | 0.056 | 0.254 |
| 0    | 18 | 40.98 | 40.70 | 24.31 | 1.26 | 6.73 | 107.33 | 0.415 | 0.263 | 0.176 | 0.070 | 0.221 |
| 250  |    | 40.82 | 40.48 | 26.54 | 1.30 | 6.08 | 110.87 | 0.423 | 0.239 | 0.166 | 0.062 | 0.157 |
| 500  |    | 40.70 | 40.31 | 26.24 | 1.32 | 6.22 | 113.09 | 0.431 | 0.245 | 0.171 | 0.052 | 0.178 |
| 1000 |    | 40.62 | 40.24 | 26.66 | 1.40 | 6.43 | 121.19 | 0.458 | 0.254 | 0.181 | 0.051 | 0.170 |
| 2000 |    | 40.49 | 40.08 | 26.58 | 1.47 | 6.64 | 125.46 | 0.483 | 0.264 | 0.188 | 0.053 | 0.268 |
| 0    | 19 | 40.43 | 40.11 | 22.99 | 1.41 | 7.34 | 103.20 | 0.464 | 0.291 | 0.179 | 0.087 | 0.417 |
| 250  |    | 40.24 | 39.84 | 24.22 | 1.51 | 7.22 | 110.47 | 0.499 | 0.289 | 0.182 | 0.074 | 0.279 |
| 500  |    | 40.11 | 39.70 | 23.79 | 1.55 | 7.51 | 113.62 | 0.513 | 0.301 | 0.190 | 0.062 | 0.316 |
| 1000 |    | 40.01 | 39.56 | 23.79 | 1.66 | 7.89 | 122.56 | 0.550 | 0.318 | 0.205 | 0.059 | 0.330 |
| 2000 |    | 39.87 | 39.40 | 23.44 | 1.74 | 8.22 | 126.95 | 0.580 | 0.332 | 0.215 | 0.079 | 0.656 |
| 0    | 20 | 41.28 | 40.88 | 22.66 | 1.56 | 7.82 | 101.42 | 0.500 | 0.305 | 0.178 | 0.143 | 1.966 |
| 250  |    | 41.15 | 40.71 | 24.28 | 1.59 | 7.34 | 106.68 | 0.512 | 0.287 | 0.175 | 0.118 | 1.277 |
| 500  |    | 41.02 | 40.57 | 24.10 | 1.61 | 7.56 | 109.85 | 0.522 | 0.297 | 0.181 | 0.101 | 1.490 |
| 1000 |    | 40.92 | 40.44 | 24.50 | 1.71 | 7.89 | 119.65 | 0.555 | 0.310 | 0.194 | 0.097 | 1.536 |
| 2000 |    | 40.78 | 40.26 | 24.23 | 1.80 | 8.27 | 127.52 | 0.585 | 0.327 | 0.209 | 0.108 | 3.500 |
| 0    | 21 | 40.88 | 40.61 | 24.57 | 1.23 | 6.46 | 106.48 | 0.480 | 0.253 | 0.172 | 0.069 | 0.242 |
| 250  |    | 40.74 | 40.44 | 27.07 | 1.22 | 5.74 | 111.25 | 0.397 | 0.226 | 0.164 | 0.059 | 0.124 |
| 500  |    | 40.64 | 40.32 | 26.68 | 1.23 | 5.86 | 112.13 | 0.403 | 0.231 | 0.167 | 0.050 | 0.153 |
| 1000 |    | 40.57 | 40.23 | 27.04 | 1.30 | 5.98 | 116.45 | 0.424 | 0.237 | 0.171 | 0.053 | 0.198 |
| 2000 |    | 40.48 | 40.11 | 26.78 | 1.34 | 6.14 | 118.20 | 0.441 | 0.244 | 0.176 | 0.084 | 0.654 |
| 0    | 22 | 41.01 | 40.75 | 24.44 | 1.23 | 6.57 | 110.12 | 0.398 | 0.257 | 0.179 | 0.067 | 0.232 |
| 250  |    | 40.83 | 40.52 | 26.93 | 1.27 | 6.08 | 120.93 | 0.412 | 0.239 | 0.179 | 0.057 | 0.119 |
| 500  |    | 40.71 | 40.39 | 26.43 | 1.30 | 6.26 | 122.53 | 0.424 | 0.247 | 0.184 | 0.047 | 0.144 |
| 1000 |    | 40.62 | 40.26 | 26.80 | 1.39 | 6.52 | 130.35 | 0.455 | 0.258 | 0.194 | 0.046 | 0.163 |
| 2000 |    | 40.50 | 40.09 | 26.43 | 1.48 | 6.88 | 136.71 | 0.486 | 0.273 | 0.206 | 0.048 | 0.334 |
| 0    | 23 | 41.09 | 40.73 | 23.52 | 1.45 | 7.20 | 107.49 | 0.469 | 0.281 | 0.182 | 0.132 | 1.565 |
| 250  |    | 40.89 | 40.46 | 24.85 | 1.56 | 7.08 | 112.66 | 0.505 | 0.278 | 0.180 | 0.092 | 0.749 |
| 500  |    | 40.75 | 40.31 | 24.14 | 1.59 | 7.40 | 114.43 | 0.519 | 0.292 | 0.189 | 0.082 | 0.953 |
| 1000 |    | 40.65 | 40.18 | 24.28 | 1.69 | 7.75 | 121.34 | 0.552 | 0.307 | 0.199 | 0.080 | 1.038 |
| 2000 |    | 40.43 | 39.91 | 24.20 | 1.82 | 8.12 | 129.05 | 0.598 | 0.324 | 0.213 | 0.084 | 1.722 |
| 0    | 24 | 41.35 | 41.06 | 25.66 | 1.29 | 6.45 | 111.11 | 0.414 | 0.250 | 0.172 | 0.085 | 0.404 |
| 250  |    | 41.23 | 40.90 | 27.44 | 1.23 | 6.17 | 120.75 | 0.427 | 0.240 | 0.175 | 0.064 | 0.211 |
| 500  |    | 41.13 | 40.80 | 26.81 | 1.34 | 6.41 | 123.64 | 0.433 | 0.250 | 0.183 | 0.055 | 0.237 |
| 1000 |    | 41.08 | 40.73 | 27.02 | 1.42 | 6.74 | 133.07 | 0.458 | 0.263 | 0.196 | 0.051 | 0.245 |
| 2000 |    | 41.02 | 40.63 | 25.91 | 1.53 | 7.47 | 143.33 | 0.495 | 0.293 | 0.220 | 0.101 | 0.428 |
| 0    | 25 | 43.94 | 43.63 | 27.85 | 1.22 | 5.98 | 107.35 | 0.367 | 0.218 | 0.153 | 0.085 | 0.323 |
| 250  |    | 43.79 | 43.47 | 30.88 | 1.18 | 5.28 | 113.72 | 0.358 | 0.193 | 0.147 | 0.050 | 0.234 |
| 500  |    | 43.69 | 43.37 | 30.42 | 1.18 | 5.35 | 114.39 | 0.360 | 0.196 | 0.150 | 0.062 | 0.229 |
| 1000 |    | 43.66 | 43.31 | 30.76 | 1.22 | 5.44 | 118.19 | 0.371 | 0.200 | 0.153 | 0.061 | 0.263 |
| 2000 |    | 43.58 | 43.22 | 30.64 | 1.26 | 5.59 | 121.21 | 0.383 | 0.206 | 0.157 | 0.068 | 0.406 |

|      |    |       |       |       |      |      |        |       |       |       |       |        |
|------|----|-------|-------|-------|------|------|--------|-------|-------|-------|-------|--------|
| 0    | 26 | 42.67 | 42.32 | 25.28 | 1.30 | 6.92 | 108.51 | 0.431 | 0.260 | 0.171 | 0.086 | 0.347  |
| 250  |    | 42.40 | 41.96 | 27.18 | 1.47 | 6.49 | 111.79 | 0.461 | 0.246 | 0.164 | 0.058 | 0.270  |
| 500  |    | 42.25 | 41.79 | 26.64 | 1.52 | 6.70 | 112.62 | 0.478 | 0.255 | 0.168 | 0.068 | 0.259  |
| 1000 |    | 42.15 | 41.64 | 26.83 | 1.62 | 6.90 | 116.24 | 0.510 | 0.264 | 0.172 | 0.067 | 0.265  |
| 2000 |    | 42.01 | 41.44 | 26.47 | 1.72 | 7.16 | 117.81 | 0.543 | 0.275 | 0.177 | 0.077 | 0.338  |
| 0    | 27 | 43.06 | 42.73 | 27.21 | 1.33 | 6.43 | 119.23 | 0.410 | 0.240 | 0.174 | 0.081 | 0.481  |
| 250  |    | 42.96 | 42.59 | 30.35 | 1.28 | 5.52 | 120.20 | 0.396 | 0.206 | 0.158 | 0.060 | 0.341  |
| 500  |    | 42.84 | 42.47 | 29.98 | 1.29 | 5.59 | 120.80 | 0.399 | 0.210 | 0.160 | 0.072 | 0.334  |
| 1000 |    | 42.78 | 42.38 | 30.45 | 1.34 | 5.68 | 125.00 | 0.416 | 0.213 | 0.163 | 0.070 | 0.330  |
| 2000 |    | 42.70 | 42.28 | 30.31 | 1.39 | 5.85 | 127.87 | 0.432 | 0.220 | 0.168 | 0.077 | 0.330  |
| 0    | 28 | 45.15 | 44.84 | 26.83 | 1.31 | 6.83 | 113.68 | 0.386 | 0.243 | 0.169 | 0.080 | 0.374  |
| 250  |    | 45.04 | 44.71 | 30.15 | 1.24 | 5.82 | 118.42 | 0.365 | 0.207 | 0.156 | 0.051 | 0.227  |
| 500  |    | 44.93 | 44.60 | 29.89 | 1.24 | 5.92 | 120.78 | 0.367 | 0.211 | 0.161 | 0.063 | 0.221  |
| 1000 |    | 44.88 | 44.53 | 30.51 | 1.29 | 6.03 | 126.76 | 0.382 | 0.216 | 0.165 | 0.060 | 0.211  |
| 2000 |    | 44.80 | 44.42 | 30.32 | 1.34 | 6.22 | 130.01 | 0.397 | 0.223 | 0.171 | 0.064 | 0.258  |
| 0    | 29 | 44.01 | 43.71 | 28.38 | 1.18 | 5.86 | 105.22 | 0.356 | 0.214 | 0.148 | 0.078 | 0.236  |
| 250  |    | 43.85 | 43.50 | 31.30 | 1.19 | 5.20 | 110.13 | 0.359 | 0.190 | 0.140 | 0.049 | 0.174  |
| 500  |    | 43.72 | 43.37 | 30.70 | 1.20 | 5.30 | 110.36 | 0.366 | 0.195 | 0.143 | 0.060 | 0.170  |
| 1000 |    | 43.65 | 43.26 | 31.10 | 1.27 | 5.41 | 114.09 | 0.387 | 0.199 | 0.146 | 0.059 | 0.175  |
| 2000 |    | 43.54 | 43.10 | 30.82 | 1.34 | 5.58 | 116.07 | 0.410 | 0.206 | 0.150 | 0.064 | 0.210  |
| 0    | 30 | 44.22 | 43.90 | 29.32 | 1.18 | 5.41 | 100.77 | 0.354 | 0.196 | 0.137 | 0.132 | 1.578  |
| 250  |    | 44.12 | 43.76 | 32.39 | 1.16 | 4.71 | 104.10 | 0.348 | 0.171 | 0.128 | 0.075 | 0.834  |
| 500  |    | 44.00 | 43.65 | 31.91 | 1.16 | 4.79 | 105.25 | 0.350 | 0.175 | 0.131 | 0.084 | 0.878  |
| 1000 |    | 43.95 | 43.57 | 32.44 | 1.21 | 4.87 | 109.39 | 0.366 | 0.178 | 0.134 | 0.080 | 0.833  |
| 2000 |    | 43.86 | 43.45 | 32.23 | 1.25 | 5.01 | 111.63 | 0.379 | 0.183 | 0.138 | 0.087 | 1.156  |
| 0    | 31 | 44.66 | 44.34 | 28.69 | 1.21 | 5.62 | 105.22 | 0.361 | 0.209 | 0.146 | 0.348 | 7.190  |
| 250  |    | 44.56 | 44.23 | 32.30 | 1.17 | 5.06 | 113.66 | 0.349 | 0.182 | 0.140 | 0.275 | 5.540  |
| 500  |    | 44.45 | 44.12 | 31.89 | 1.17 | 5.14 | 115.31 | 0.350 | 0.185 | 0.144 | 0.294 | 6.850  |
| 1000 |    | 44.41 | 44.06 | 32.41 | 1.22 | 5.24 | 120.27 | 0.364 | 0.189 | 0.148 | 0.291 | 7.520  |
| 2000 |    | 44.34 | 43.96 | 32.29 | 1.26 | 5.41 | 123.70 | 0.378 | 0.196 | 0.152 | 0.354 | 13.840 |
| 0    | 32 | 44.07 | 43.75 | 28.43 | 1.23 | 5.83 | 106.25 | 0.370 | 0.212 | 0.149 | 0.172 | 3.490  |
| 250  |    | 43.97 | 43.63 | 31.67 | 1.20 | 5.07 | 110.90 | 0.362 | 0.185 | 0.139 | 0.183 | 4.890  |
| 500  |    | 43.86 | 43.51 | 31.22 | 1.20 | 5.15 | 111.81 | 0.363 | 0.188 | 0.142 | 0.225 | 7.130  |
| 1000 |    | 43.81 | 43.44 | 31.68 | 1.25 | 5.23 | 115.66 | 0.378 | 0.192 | 0.145 | 0.262 | 8.830  |
| 2000 |    | 43.73 | 43.33 | 31.43 | 1.29 | 5.38 | 117.60 | 0.393 | 0.198 | 0.149 | 0.352 | 17.880 |
| 0    | 33 | 43.80 | 43.50 | 25.67 | 1.40 | 6.93 | 106.21 | 0.423 | 0.253 | 0.165 | 0.093 | 0.168  |
| 250  |    | 43.74 | 43.34 | 27.97 | 1.39 | 6.30 | 108.02 | 0.422 | 0.231 | 0.154 | 0.091 | 0.265  |
| 500  |    | 43.61 | 43.21 | 27.36 | 1.41 | 6.53 | 108.61 | 0.429 | 0.241 | 0.158 | 0.065 | 0.342  |
| 1000 |    | 43.57 | 43.13 | 27.48 | 1.48 | 6.74 | 111.34 | 0.450 | 0.249 | 0.161 | 0.061 | 0.335  |
| 2000 |    | 43.49 | 43.02 | 27.13 | 1.54 | 7.01 | 112.74 | 0.469 | 0.260 | 0.165 | 0.067 | 0.460  |
| 0    | 34 | 43.95 | 43.54 | 27.97 | 1.20 | 5.84 | 103.97 | 0.365 | 0.214 | 0.148 | 0.084 | 0.478  |
| 250  |    | 43.73 | 43.40 | 31.31 | 1.19 | 5.14 | 111.92 | 0.361 | 0.189 | 0.142 | 0.053 | 0.351  |
| 500  |    | 43.61 | 43.28 | 30.80 | 1.19 | 5.22 | 112.90 | 0.363 | 0.192 | 0.146 | 0.063 | 0.368  |
| 1000 |    | 43.55 | 43.18 | 31.41 | 1.25 | 5.32 | 117.80 | 0.382 | 0.196 | 0.149 | 0.059 | 0.312  |
| 2000 |    | 43.45 | 43.04 | 31.21 | 1.32 | 5.49 | 120.35 | 0.402 | 0.203 | 0.153 | 0.061 | 0.372  |

|      |    |       |       |       |      |      |        |       |       |       |       |       |
|------|----|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 35 | 43.87 | 43.62 | 26.84 | 1.16 | 6.06 | 96.87  | 0.330 | 0.221 | 0.144 | 0.089 | 0.580 |
| 250  |    | 43.81 | 43.52 | 29.95 | 1.09 | 5.14 | 96.55  | 0.330 | 0.188 | 0.128 | 0.049 | 0.334 |
| 500  |    | 43.71 | 43.42 | 29.38 | 1.10 | 5.23 | 95.65  | 0.333 | 0.192 | 0.130 | 0.056 | 0.353 |
| 1000 |    | 43.67 | 43.34 | 29.81 | 1.15 | 5.31 | 97.97  | 0.348 | 0.195 | 0.131 | 0.053 | 0.342 |
| 2000 |    | 43.57 | 43.23 | 29.61 | 1.20 | 5.47 | 98.85  | 0.365 | 0.201 | 0.133 | 0.061 | 0.462 |
| 0    | 36 | 44.75 | 44.43 | 28.45 | 1.24 | 5.98 | 109.07 | 0.368 | 0.214 | 0.153 | 0.083 | 0.557 |
| 250  |    | 44.64 | 44.29 | 31.65 | 1.22 | 5.31 | 117.13 | 0.364 | 0.191 | 0.147 | 0.049 | 0.314 |
| 500  |    | 44.52 | 44.17 | 31.13 | 1.23 | 5.45 | 119.34 | 0.366 | 0.196 | 0.153 | 0.058 | 0.328 |
| 1000 |    | 44.47 | 44.10 | 31.67 | 1.28 | 5.58 | 125.03 | 0.381 | 0.201 | 0.157 | 0.056 | 0.319 |
| 2000 |    | 44.40 | 44.00 | 31.41 | 1.33 | 5.76 | 127.82 | 0.396 | 0.208 | 0.162 | 0.061 | 0.434 |
| 0    | 37 | 43.77 | 43.46 | 26.21 | 1.27 | 6.47 | 102.88 | 0.384 | 0.237 | 0.156 | 0.111 | 1.490 |
| 250  |    | 43.72 | 43.39 | 29.09 | 1.21 | 5.53 | 101.85 | 0.366 | 0.203 | 0.139 | 0.087 | 1.200 |
| 500  |    | 43.62 | 43.29 | 28.65 | 1.20 | 5.60 | 101.21 | 0.366 | 0.206 | 0.141 | 0.095 | 1.419 |
| 1000 |    | 43.68 | 43.24 | 29.04 | 1.24 | 5.63 | 102.99 | 0.376 | 0.207 | 0.141 | 0.092 | 1.481 |
| 2000 |    | 43.54 | 43.17 | 28.80 | 1.26 | 5.75 | 103.51 | 0.384 | 0.212 | 0.143 | 0.109 | 2.520 |
| 0    | 38 | 42.82 | 42.54 | 27.40 | 1.18 | 5.93 | 109.92 | 0.365 | 0.222 | 0.160 | 0.069 | 0.220 |
| 250  |    | 42.68 | 42.37 | 30.20 | 1.18 | 5.35 | 117.44 | 0.366 | 0.201 | 0.155 | 0.041 | 0.145 |
| 500  |    | 42.57 | 42.26 | 29.61 | 1.19 | 5.49 | 118.95 | 0.371 | 0.207 | 0.160 | 0.049 | 0.137 |
| 1000 |    | 42.52 | 42.19 | 30.02 | 1.24 | 5.64 | 124.37 | 0.388 | 0.213 | 0.165 | 0.045 | 0.138 |
| 2000 |    | 42.44 | 42.09 | 29.71 | 1.29 | 5.84 | 127.32 | 0.402 | 0.221 | 0.171 | 0.051 | 0.142 |
| 0    | 39 | 43.60 | 43.28 | 26.18 | 1.30 | 6.45 | 101.38 | 0.395 | 0.237 | 0.154 | 0.085 | 0.311 |
| 250  |    | 43.42 | 43.03 | 28.78 | 1.33 | 5.84 | 103.98 | 0.407 | 0.216 | 0.144 | 0.047 | 0.197 |
| 500  |    | 43.28 | 42.88 | 28.03 | 1.35 | 6.00 | 102.74 | 0.414 | 0.223 | 0.146 | 0.056 | 0.188 |
| 1000 |    | 43.22 | 42.78 | 28.43 | 1.43 | 6.17 | 106.28 | 0.438 | 0.230 | 0.149 | 0.051 | 0.180 |
| 2000 |    | 43.12 | 42.65 | 28.13 | 1.48 | 6.37 | 107.31 | 0.456 | 0.238 | 0.152 | 0.058 | 0.194 |
| 0    | 40 | 43.53 | 43.21 | 26.34 | 1.29 | 6.40 | 105.48 | 0.394 | 0.236 | 0.159 | 0.092 | 0.339 |
| 250  |    | 43.31 | 42.90 | 28.74 | 1.38 | 6.01 | 111.17 | 0.422 | 0.223 | 0.154 | 0.047 | 0.204 |
| 500  |    | 43.15 | 42.72 | 27.96 | 1.43 | 6.25 | 111.36 | 0.439 | 0.233 | 0.158 | 0.035 | 0.208 |
| 1000 |    | 43.05 | 42.57 | 28.26 | 1.54 | 6.51 | 116.13 | 0.474 | 0.243 | 0.163 | 0.054 | 0.208 |
| 2000 |    | 42.90 | 42.36 | 27.87 | 1.64 | 6.77 | 117.67 | 0.507 | 0.254 | 0.168 | 0.059 | 0.240 |
| 0    | 41 | 43.26 | 42.93 | 27.13 | 1.29 | 6.16 | 110.67 | 0.395 | 0.228 | 0.162 | 0.082 | 0.482 |
| 250  |    | 43.15 | 42.78 | 30.48 | 1.27 | 5.37 | 116.76 | 0.389 | 0.200 | 0.152 | 0.054 | 0.386 |
| 500  |    | 43.03 | 42.66 | 30.11 | 1.27 | 5.47 | 118.18 | 0.391 | 0.204 | 0.156 | 0.062 | 0.413 |
| 1000 |    | 42.97 | 42.59 | 30.72 | 1.32 | 5.57 | 123.37 | 0.407 | 0.208 | 0.160 | 0.057 | 0.410 |
| 2000 |    | 42.91 | 42.49 | 30.50 | 1.36 | 5.72 | 125.64 | 0.421 | 0.214 | 0.164 | 0.065 | 0.562 |
| 0    | 42 | 44.30 | 43.95 | 28.43 | 1.27 | 5.69 | 102.89 | 0.381 | 0.206 | 0.144 | 0.083 | 0.366 |
| 250  |    | 44.18 | 43.79 | 31.92 | 1.26 | 4.93 | 108.54 | 0.378 | 0.179 | 0.135 | 0.050 | 0.250 |
| 500  |    | 44.06 | 43.67 | 31.47 | 1.25 | 4.98 | 109.32 | 0.375 | 0.182 | 0.138 | 0.059 | 0.257 |
| 1000 |    | 44.01 | 43.59 | 32.17 | 1.30 | 5.04 | 113.77 | 0.391 | 0.184 | 0.141 | 0.055 | 0.252 |
| 2000 |    | 43.93 | 43.47 | 31.99 | 1.33 | 5.16 | 115.75 | 0.402 | 0.189 | 0.144 | 0.062 | 0.284 |
| 0    | 43 | 44.52 | 44.16 | 26.40 | 1.37 | 6.63 | 106.59 | 0.410 | 0.239 | 0.161 | 0.169 | 2.110 |
| 250  |    | 44.41 | 44.01 | 29.56 | 1.35 | 5.84 | 112.32 | 0.404 | 0.211 | 0.151 | 0.129 | 1.741 |
| 500  |    | 44.29 | 43.88 | 28.99 | 1.36 | 5.96 | 112.36 | 0.409 | 0.216 | 0.154 | 0.134 | 2.140 |
| 1000 |    | 44.24 | 43.80 | 29.42 | 1.43 | 6.10 | 116.46 | 0.428 | 0.222 | 0.158 | 0.124 | 2.180 |
| 2000 |    | 44.14 | 43.67 | 29.15 | 1.47 | 6.31 | 118.49 | 0.448 | 0.230 | 0.162 | 0.136 | 3.620 |

|      |    |       |       |       |      |      |        |       |       |       |       |       |
|------|----|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 44 | 43.77 | 43.44 | 28.06 | 1.20 | 5.59 | 104.74 | 0.338 | 0.216 | 0.149 | 0.074 | 0.310 |
| 250  |    | 43.68 | 43.29 | 31.28 | 1.26 | 5.11 | 108.85 | 0.384 | 0.188 | 0.138 | 0.049 | 0.245 |
| 500  |    | 43.55 | 43.17 | 30.84 | 1.26 | 5.16 | 109.53 | 0.384 | 0.190 | 0.141 | 0.056 | 0.269 |
| 1000 |    | 43.50 | 43.09 | 31.33 | 1.30 | 5.22 | 112.71 | 0.398 | 0.193 | 0.143 | 0.054 | 0.274 |
| 2000 |    | 43.41 | 42.98 | 31.12 | 1.35 | 5.35 | 114.67 | 0.412 | 0.198 | 0.147 | 0.059 | 0.372 |

|      |    |       |       |       |      |      |        |       |       |       |       |       |
|------|----|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 45 | 43.57 | 43.21 | 26.39 | 1.34 | 6.35 | 101.32 | 0.409 | 0.234 | 0.153 | 0.107 | 1.049 |
| 250  |    | 43.43 | 43.01 | 29.14 | 1.36 | 5.69 | 103.21 | 0.414 | 0.210 | 0.141 | 0.060 | 0.600 |
| 500  |    | 43.30 | 42.88 | 28.50 | 1.36 | 5.79 | 102.01 | 0.417 | 0.215 | 0.142 | 0.072 | 0.711 |
| 1000 |    | 43.24 | 42.79 | 28.84 | 1.42 | 5.92 | 104.67 | 0.436 | 0.220 | 0.144 | 0.066 | 0.687 |
| 2000 |    | 43.15 | 42.68 | 28.56 | 1.47 | 6.10 | 105.65 | 0.452 | 0.228 | 0.147 | 0.073 | 0.978 |

|      |    |       |       |       |      |      |        |       |       |       |       |       |
|------|----|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 46 | 44.82 | 44.49 | 27.75 | 1.33 | 6.49 | 115.28 | 0.393 | 0.232 | 0.165 | 0.421 | 3.820 |
| 250  |    | 44.71 | 44.33 | 30.77 | 1.33 | 5.88 | 125.21 | 0.395 | 0.211 | 0.162 | 0.347 | 3.820 |
| 500  |    | 44.58 | 44.20 | 30.28 | 1.34 | 6.02 | 127.32 | 0.400 | 0.217 | 0.167 | 0.349 | 3.440 |
| 1000 |    | 44.51 | 44.09 | 30.70 | 1.41 | 6.21 | 133.45 | 0.422 | 0.224 | 0.173 | 0.346 | 3.480 |
| 2000 |    | 44.40 | 43.96 | 30.25 | 1.48 | 6.45 | 135.94 | 0.441 | 0.234 | 0.179 | 0.378 | 5.240 |

|      |    |       |       |       |      |      |        |       |       |       |       |       |
|------|----|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 47 | 44.27 | 43.91 | 28.55 | 1.28 | 5.85 | 106.71 | 0.383 | 0.212 | 0.149 | 0.106 | 1.130 |
| 250  |    | 44.16 | 43.76 | 32.16 | 1.27 | 5.13 | 114.29 | 0.380 | 0.187 | 0.141 | 0.070 | 1.062 |
| 500  |    | 44.03 | 43.64 | 31.74 | 1.27 | 5.24 | 116.18 | 0.384 | 0.191 | 0.146 | 0.084 | 1.454 |
| 1000 |    | 43.98 | 43.56 | 32.33 | 1.33 | 5.36 | 121.58 | 0.401 | 0.196 | 0.150 | 0.087 | 1.741 |
| 2000 |    | 43.91 | 43.45 | 32.06 | 1.38 | 5.51 | 124.11 | 0.416 | 0.202 | 0.154 | 0.106 | 3.200 |

|      |    |       |       |       |      |      |       |       |       |       |       |       |
|------|----|-------|-------|-------|------|------|-------|-------|-------|-------|-------|-------|
| 0    | 48 | 43.40 | 43.12 | 25.62 | 1.21 | 6.55 | 98.53 | 0.370 | 0.242 | 0.153 | 0.073 | 0.303 |
| 250  |    | 43.31 | 43.00 | 28.58 | 1.17 | 5.67 | 98.59 | 0.358 | 0.210 | 0.137 | 0.046 | 0.228 |
| 500  |    | 43.22 | 42.89 | 27.95 | 1.18 | 5.78 | 96.77 | 0.362 | 0.214 | 0.138 | 0.046 | 0.252 |
| 1000 |    | 43.17 | 42.83 | 28.40 | 1.22 | 5.88 | 99.35 | 0.376 | 0.219 | 0.139 | 0.045 | 0.249 |
| 2000 |    | 43.11 | 42.74 | 28.11 | 1.26 | 6.05 | 99.55 | 0.388 | 0.225 | 0.141 | 0.049 | 0.328 |

\*\*\* SPRAGUE ELECTRIC SURGE CURRENT TEST PROGRAM \*\*\*

--- SURGE CURRENT SCREENED UNITS ---

11/14/79

LIFT TEST -- 125C, VOLTS

| UNIT  |     | CAPACITANCE (uf)--- |       |       |  | DISSIPATION FACTOR (%) |      |        |  | ESR (OHMS) |       |       |  | DCL (uA)--- |       | FUSE-- |  |
|-------|-----|---------------------|-------|-------|--|------------------------|------|--------|--|------------|-------|-------|--|-------------|-------|--------|--|
| HOURS | NO. | 120Hz               | 1KHz  | 40KHz |  | 120Hz                  | 1KHz | 40KHz  |  | 120Hz      | 1KHz  | 40KHz |  | 25C         | 85C   | BLOW   |  |
| 0     | 1   | 42.32               | 41.99 | 26.17 |  | 1.33                   | 6.26 | 108.78 |  | 0.417      | 0.237 | 0.165 |  | 0.085       | 0.367 |        |  |
|       |     | 42.20               | 41.81 | 28.98 |  | 1.33                   | 5.54 | 112.80 |  | 0.420      | 0.211 | 0.155 |  | 0.108       | 0.463 |        |  |
|       |     | 42.04               | 41.64 | 29.22 |  | 1.35                   | 5.63 | 116.77 |  | 0.426      | 0.215 | 0.159 |  | 0.354       | 0.440 |        |  |
|       |     | 41.93               | 41.48 | 27.96 |  | 1.50                   | 6.27 | 123.83 |  | 0.475      | 0.249 | 0.176 |  | 1.667       | 5.210 |        |  |
|       |     | 41.80               | 41.30 | 27.43 |  | 1.66                   | 6.97 | 132.87 |  | 0.526      | 0.269 | 0.193 |  | 4.700       | 3.580 |        |  |
| 0     | 2   | 39.03               | 38.70 | 21.58 |  | 1.44                   | 7.57 | 101.76 |  | 0.489      | 0.311 | 0.188 |  | 0.065       | 0.225 |        |  |
|       |     | 38.83               | 38.44 | 23.41 |  | 1.48                   | 6.93 | 104.67 |  | 0.504      | 0.287 | 0.178 |  | 0.092       | 0.295 |        |  |
|       |     | 38.70               | 38.30 | 23.43 |  | 1.50                   | 7.09 | 107.08 |  | 0.516      | 0.295 | 0.182 |  | 0.184       | 0.283 |        |  |
|       |     | 38.62               | 38.17 | 23.28 |  | 1.59                   | 7.26 | 110.00 |  | 0.545      | 0.303 | 0.183 |  | 0.329       | 0.525 |        |  |
|       |     | 38.49               | 37.99 | 23.41 |  | 1.70                   | 7.46 | 114.34 |  | 0.585      | 0.313 | 0.194 |  | 0.244       | 0.320 |        |  |
| 0     | 3   | 41.03               | 40.73 | 24.71 |  | 1.25                   | 6.26 | 96.60  |  | 0.406      | 0.245 | 0.156 |  | 0.116       | 1.856 |        |  |
|       |     | 40.97               | 40.66 | 26.89 |  | 1.22                   | 5.54 | 100.08 |  | 0.395      | 0.217 | 0.148 |  | 0.140       | 1.483 |        |  |
|       |     | 40.87               | 40.55 | 27.00 |  | 1.21                   | 5.57 | 102.46 |  | 0.393      | 0.218 | 0.151 |  | 0.268       | 1.394 |        |  |
|       |     | 40.83               | 40.50 | 26.95 |  | 1.25                   | 5.59 | 103.73 |  | 0.405      | 0.220 | 0.153 |  | 0.512       | 1.847 |        |  |
|       |     | 40.78               | 40.41 | 27.19 |  | 1.30                   | 5.72 | 107.44 |  | 0.423      | 0.235 | 0.157 |  | 0.524       | 2.480 |        |  |
| 0     | 4   | 42.17               | 41.90 | 22.98 |  | 1.38                   | 7.86 | 110.15 |  | 0.433      | 0.298 | 0.191 |  | 0.057       | 0.244 |        |  |
|       |     | 42.07               | 41.76 | 25.00 |  | 1.35                   | 7.16 | 114.93 |  | 0.426      | 0.273 | 0.183 |  | 0.083       | 0.272 |        |  |
|       |     | 41.96               | 41.64 | 25.04 |  | 1.37                   | 7.30 | 117.75 |  | 0.433      | 0.279 | 0.187 |  | 0.181       | 0.281 |        |  |
|       |     | 41.91               | 41.56 | 25.14 |  | 1.42                   | 7.43 | 121.91 |  | 0.451      | 0.285 | 0.193 |  | 0.376       | 0.767 |        |  |
|       |     | 41.84               | 41.46 | 25.40 |  | 1.49                   | 7.68 | 128.41 |  | 0.473      | 0.295 | 0.201 |  | 0.392       | 1.380 |        |  |
| 0     | 5   | 41.31               | 41.04 | 24.95 |  | 1.22                   | 6.36 | 105.42 |  | 0.391      | 0.247 | 0.168 |  | 0.060       | 0.363 |        |  |
|       |     | 41.22               | 40.93 | 27.56 |  | 1.18                   | 5.63 | 109.84 |  | 0.381      | 0.219 | 0.159 |  | 0.090       | 0.343 |        |  |
|       |     | 41.10               | 40.80 | 27.59 |  | 1.20                   | 5.73 | 112.91 |  | 0.387      | 0.224 | 0.163 |  | 0.227       | 0.376 |        |  |
|       |     | 41.04               | 40.72 | 27.29 |  | 1.25                   | 5.85 | 113.89 |  | 0.405      | 0.239 | 0.166 |  | 0.476       | 0.904 |        |  |
|       |     | 40.98               | 40.62 | 27.31 |  | 1.31                   | 6.07 | 117.86 |  | 0.425      | 0.238 | 0.172 |  | 0.492       | 1.520 |        |  |
| 0     | 6   | 39.90               | 39.58 | 22.50 |  | 1.37                   | 7.08 | 102.04 |  | 0.455      | 0.285 | 0.180 |  | 0.075       | 0.453 |        |  |
|       |     | 39.76               | 39.40 | 24.48 |  | 1.38                   | 6.49 | 107.52 |  | 0.461      | 0.262 | 0.175 |  | 0.091       | 0.375 |        |  |
|       |     | 39.62               | 39.24 | 24.52 |  | 1.42                   | 6.66 | 112.28 |  | 0.475      | 0.270 | 0.182 |  | 0.302       | 0.447 |        |  |
|       |     | 39.53               | 39.11 | 24.36 |  | 1.51                   | 6.81 | 115.84 |  | 0.507      | 0.277 | 0.189 |  | 0.673       | 1.107 |        |  |
|       |     | 39.40               | 38.94 | 24.42 |  | 1.60                   | 7.02 | 120.16 |  | 0.539      | 0.287 | 0.196 |  | 0.696       | 1.700 |        |  |
| 0     | 7   | 41.71               | 41.32 | 22.01 |  | 1.61                   | 8.72 | 108.12 |  | 0.513      | 0.336 | 0.195 |  | 0.084       | 1.084 |        |  |
|       |     | 41.59               | 41.17 | 23.37 |  | 1.61                   | 8.12 | 111.82 |  | 0.513      | 0.314 | 0.190 |  | 0.092       | 0.536 |        |  |
|       |     | 41.46               | 41.04 | 23.33 |  | 1.62                   | 8.31 | 114.86 |  | 0.519      | 0.322 | 0.196 |  | 0.172       | 0.435 |        |  |
|       |     | 41.41               | 40.96 | 23.31 |  | 1.68                   | 8.46 | 119.13 |  | 0.539      | 0.329 | 0.203 |  | 0.376       | 0.695 |        |  |
|       |     | 41.34               | 40.86 | 23.39 |  | 1.76                   | 8.77 | 125.92 |  | 0.564      | 0.342 | 0.214 |  | 0.408       | 0.920 |        |  |

|      |       |       |       |      |      |        |       |       |       |       |       |
|------|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 42.04 | 41.71 | 22.86 | 1.41 | 7.94 | 191.48 | 0.446 | 0.301 | 0.177 | 0.056 | 0.210 |
| 250  | 41.92 | 41.56 | 24.88 | 1.39 | 7.15 | 105.55 | 0.430 | 0.274 | 0.169 | 0.081 | 0.277 |
| 500  | 41.80 | 41.43 | 25.03 | 1.40 | 7.24 | 108.02 | 0.444 | 0.278 | 0.172 | 0.217 | 0.350 |
| 1000 | 41.73 | 41.33 | 25.14 | 1.45 | 7.30 | 109.64 | 0.462 | 0.281 | 0.174 | 0.439 | 0.905 |
| 2000 | 41.64 | 41.20 | 25.33 | 1.52 | 7.51 | 113.39 | 0.465 | 0.290 | 0.178 | 0.448 | 1.440 |
| 0    | 40.60 | 40.33 | 23.03 | 1.31 | 7.27 | 105.37 | 0.439 | 0.287 | 0.182 | 0.069 | 0.263 |
| 250  | 40.51 | 40.23 | 25.22 | 1.27 | 6.54 | 113.42 | 0.416 | 0.259 | 0.179 | 0.074 | 0.282 |
| 500  | 40.42 | 40.13 | 25.24 | 1.27 | 6.65 | 117.98 | 0.418 | 0.264 | 0.186 | 0.197 | 0.424 |
| 1000 | 40.38 | 40.07 | 25.29 | 1.32 | 6.79 | 123.14 | 0.435 | 0.270 | 0.194 | 0.416 | 1.239 |
| 2000 | 40.31 | 39.97 | 25.51 | 1.40 | 7.10 | 131.43 | 0.461 | 0.283 | 0.205 | 0.412 | 2.040 |
| 0    | 41.83 | 41.56 | 25.55 | 1.25 | 6.44 | 113.07 | 0.396 | 0.247 | 0.176 | 0.074 | 0.298 |
| 250  | 41.74 | 41.45 | 28.09 | 1.21 | 5.74 | 117.30 | 0.383 | 0.220 | 0.166 | 0.105 | 0.446 |
| 500  | 41.63 | 41.34 | 28.15 | 1.21 | 5.82 | 119.95 | 0.385 | 0.224 | 0.170 | 0.221 | 0.586 |
| 1000 | 41.60 | 41.29 | 27.93 | 1.25 | 5.94 | 121.75 | 0.399 | 0.229 | 0.173 | 0.327 | 1.057 |
| 2000 | 41.55 | 41.22 | 27.91 | 1.30 | 6.19 | 126.43 | 0.415 | 0.239 | 0.180 | 0.346 | 1.340 |
| 0    | 40.01 | 39.74 | 22.72 | 1.30 | 7.08 | 101.00 | 0.430 | 0.284 | 0.177 | 0.078 | 0.336 |
| 250  | 39.87 | 39.57 | 24.47 | 1.28 | 6.42 | 103.79 | 0.426 | 0.258 | 0.169 | 0.073 | 0.276 |
| 500  | 39.75 | 39.44 | 24.34 | 1.30 | 6.54 | 104.88 | 0.434 | 0.264 | 0.171 | 0.211 | 0.353 |
| 1000 | 39.68 | 39.32 | 24.31 | 1.38 | 6.66 | 106.75 | 0.460 | 0.270 | 0.175 | 0.457 | 1.019 |
| 2000 | 39.57 | 39.18 | 24.34 | 1.45 | 6.86 | 109.63 | 0.487 | 0.279 | 0.179 | 0.470 | 1.720 |
| 0    | 40.72 | 40.41 | 22.56 | 1.36 | 7.38 | 97.29  | 0.442 | 0.291 | 0.172 | 0.058 | 0.215 |
| 250  | 40.60 | 40.25 | 24.16 | 1.37 | 6.88 | 102.28 | 0.449 | 0.272 | 0.168 | 0.074 | 0.235 |
| 500  | 40.47 | 40.11 | 24.16 | 1.41 | 7.17 | 108.71 | 0.464 | 0.284 | 0.179 | 0.193 | 0.296 |
| 1000 | 40.38 | 39.99 | 23.78 | 1.51 | 7.49 | 114.59 | 0.498 | 0.298 | 0.192 | 0.384 | 0.803 |
| 2000 | 40.26 | 39.83 | 23.72 | 1.61 | 7.82 | 120.10 | 0.531 | 0.313 | 0.201 | 0.376 | 1.300 |
| 0    | 40.38 | 40.05 | 22.07 | 1.45 | 7.77 | 103.55 | 0.475 | 0.309 | 0.187 | 0.084 | 0.311 |
| 250  | 40.18 | 39.80 | 23.56 | 1.48 | 7.23 | 107.01 | 0.488 | 0.289 | 0.181 | 0.076 | 0.271 |
| 500  | 40.04 | 39.64 | 23.46 | 1.51 | 7.43 | 109.35 | 0.501 | 0.298 | 0.185 | 0.223 | 0.318 |
| 1000 | 39.94 | 39.50 | 23.25 | 1.60 | 7.60 | 110.06 | 0.530 | 0.306 | 0.188 | 0.499 | 0.915 |
| 2000 | 39.82 | 39.34 | 23.30 | 1.69 | 7.85 | 113.71 | 0.562 | 0.318 | 0.194 | 0.500 | 1.460 |
| 0    | 39.00 | 38.68 | 20.72 | 1.45 | 7.89 | 99.22  | 0.493 | 0.325 | 0.191 | 0.055 | 0.197 |
| 250  | 38.80 | 38.42 | 22.37 | 1.47 | 7.14 | 100.76 | 0.504 | 0.296 | 0.179 | 0.081 | 0.264 |
| 500  | 38.63 | 38.23 | 22.43 | 1.52 | 7.27 | 102.18 | 0.522 | 0.303 | 0.181 | 0.230 | 0.365 |
| 1000 | 38.49 | 38.02 | 22.21 | 1.63 | 7.37 | 101.84 | 0.563 | 0.309 | 0.182 | 0.441 | 0.955 |
| 2000 | 38.29 | 37.77 | 22.16 | 1.75 | 7.58 | 103.93 | 0.608 | 0.319 | 0.187 | 0.446 | 1.540 |
| 0    | 42.33 | 42.09 | 25.12 | 1.24 | 6.84 | 116.96 | 0.390 | 0.259 | 0.185 | 0.052 | 0.488 |
| 250  | 42.30 | 42.04 | 27.92 | 1.17 | 5.97 | 121.28 | 0.368 | 0.226 | 0.173 | 0.075 | 0.329 |
| 500  | 42.19 | 41.93 | 28.20 | 1.18 | 6.02 | 124.86 | 0.371 | 0.229 | 0.176 | 0.193 | 0.355 |
| 1000 | 42.14 | 41.85 | 27.89 | 1.23 | 6.15 | 125.77 | 0.389 | 0.234 | 0.179 | 0.305 | 0.763 |
| 2000 | 42.05 | 41.72 | 27.82 | 1.31 | 6.43 | 130.35 | 0.413 | 0.245 | 0.186 | 0.294 | 1.220 |
| 0    | 41.33 | 41.06 | 24.93 | 1.24 | 6.46 | 108.57 | 0.400 | 0.251 | 0.173 | 0.062 | 0.278 |
| 250  | 41.24 | 40.94 | 27.15 | 1.22 | 5.78 | 111.57 | 0.391 | 0.225 | 0.163 | 0.073 | 0.248 |
| 500  | 41.12 | 40.82 | 27.33 | 1.23 | 5.88 | 114.82 | 0.396 | 0.229 | 0.167 | 0.157 | 0.335 |
| 1000 | 41.06 | 40.72 | 27.08 | 1.29 | 5.99 | 115.50 | 0.417 | 0.234 | 0.170 | 0.315 | 0.950 |
| 2000 | 40.95 | 40.58 | 27.10 | 1.37 | 6.22 | 119.24 | 0.442 | 0.244 | 0.175 | 0.318 | 1.580 |

|      |    |       |       |       |      |      |        |       |       |       |       |       |
|------|----|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 17 | 39.52 | 39.29 | 22.19 | 1.43 | 7.35 | 100.72 | 0.478 | 0.293 | 0.181 | 0.060 | 0.257 |
| 250  |    | 39.51 | 39.16 | 23.70 | 1.40 | 6.62 | 104.02 | 0.470 | 0.269 | 0.175 | 0.075 | 0.279 |
| 500  |    | 39.37 | 39.01 | 23.88 | 1.41 | 6.68 | 107.64 | 0.476 | 0.273 | 0.179 | 0.239 | 0.366 |
| 1000 |    | 39.28 | 38.88 | 23.73 | 1.49 | 6.78 | 109.13 | 0.502 | 0.277 | 0.183 | 0.489 | 1.048 |
| 2000 |    | 39.16 | 38.72 | 23.71 | 1.57 | 7.00 | 112.48 | 0.532 | 0.288 | 0.189 | 0.480 | 1.600 |
| 0    | 18 | 39.64 | 39.29 | 21.78 | 1.49 | 7.54 | 102.54 | 0.499 | 0.305 | 0.187 | 0.093 | 1.733 |
| 250  |    | 39.51 | 39.12 | 23.59 | 1.48 | 6.82 | 106.78 | 0.497 | 0.277 | 0.180 | 0.095 | 0.929 |
| 500  |    | 39.38 | 38.98 | 23.74 | 1.49 | 6.90 | 109.69 | 0.503 | 0.282 | 0.184 | 0.330 | 0.838 |
| 1000 |    | 39.30 | 38.87 | 23.66 | 1.55 | 6.97 | 110.64 | 0.523 | 0.285 | 0.186 | 0.665 | 1.171 |
| 2000 |    | 39.20 | 38.74 | 23.75 | 1.62 | 7.16 | 114.23 | 0.547 | 0.294 | 0.191 | 0.692 | 1.460 |
| 0    | 19 | 41.77 | 41.52 | 24.90 | 1.20 | 6.42 | 106.38 | 0.381 | 0.246 | 0.170 | 0.049 | 0.259 |
| 250  |    | 41.72 | 41.46 | 27.31 | 1.13 | 5.70 | 111.93 | 0.361 | 0.219 | 0.163 | 0.065 | 0.265 |
| 500  |    | 41.62 | 41.37 | 27.37 | 1.14 | 5.81 | 116.66 | 0.363 | 0.224 | 0.170 | 0.160 | 0.415 |
| 1000 |    | 41.58 | 41.31 | 27.21 | 1.19 | 5.98 | 120.93 | 0.380 | 0.231 | 0.177 | 0.333 | 1.140 |
| 2000 |    | 41.53 | 41.23 | 27.29 | 1.24 | 6.23 | 126.83 | 0.398 | 0.240 | 0.185 | 0.348 | 1.840 |
| 0    | 20 | 39.80 | 39.44 | 22.27 | 1.47 | 7.26 | 100.90 | 0.490 | 0.293 | 0.180 | 0.135 | 3.790 |
| 250  |    | 39.67 | 39.26 | 24.12 | 1.49 | 6.65 | 104.27 | 0.497 | 0.270 | 0.172 | 0.112 | 1.435 |
| 500  |    | 39.50 | 39.06 | 24.10 | 1.54 | 6.90 | 107.47 | 0.518 | 0.281 | 0.177 | 0.283 | 1.171 |
| 1000 |    | 39.34 | 38.83 | 23.93 | 1.68 | 7.13 | 109.58 | 0.565 | 0.292 | 0.182 | 0.493 | 1.494 |
| 2000 |    | 39.14 | 38.59 | 24.02 | 1.79 | 7.39 | 114.31 | 0.606 | 0.305 | 0.189 | 0.754 | 1.880 |
| 0    | 21 | 40.59 | 40.31 | 23.54 | 1.28 | 6.87 | 101.88 | 0.420 | 0.271 | 0.172 | 0.072 | 0.438 |
| 250  |    | 40.51 | 40.21 | 25.61 | 1.24 | 6.16 | 106.58 | 0.407 | 0.244 | 0.165 | 0.070 | 0.274 |
| 500  |    | 40.39 | 40.09 | 25.70 | 1.26 | 6.29 | 111.46 | 0.415 | 0.250 | 0.173 | 0.249 | 0.592 |
| 1000 |    | 40.33 | 39.98 | 25.29 | 1.36 | 6.59 | 117.07 | 0.446 | 0.262 | 0.184 | 0.463 | 1.742 |
| 2000 |    | 40.22 | 39.83 | 25.22 | 1.45 | 6.88 | 122.17 | 0.477 | 0.275 | 0.193 | 0.450 | 2.720 |
| 0    | 22 | 41.14 | 40.80 | 23.24 | 1.41 | 7.35 | 102.62 | 0.455 | 0.287 | 0.176 | 0.061 | 0.514 |
| 250  |    | 41.00 | 40.62 | 25.24 | 1.41 | 6.62 | 104.68 | 0.455 | 0.259 | 0.165 | 0.076 | 0.369 |
| 500  |    | 40.83 | 40.42 | 25.27 | 1.46 | 6.83 | 108.88 | 0.476 | 0.269 | 0.171 | 0.166 | 0.392 |
| 1000 |    | 40.67 | 40.19 | 24.98 | 1.61 | 7.11 | 112.97 | 0.525 | 0.282 | 0.180 | 0.280 | 0.714 |
| 2000 |    | 40.48 | 39.95 | 24.98 | 1.74 | 7.43 | 118.26 | 0.569 | 0.296 | 0.188 | 0.272 | 0.940 |
| 0    | 23 | 40.69 | 40.40 | 23.24 | 1.36 | 7.38 | 110.63 | 0.444 | 0.291 | 0.189 | 0.088 | 0.573 |
| 250  |    | 40.58 | 40.27 | 25.07 | 1.35 | 6.81 | 119.35 | 0.441 | 0.269 | 0.189 | 0.078 | 0.380 |
| 500  |    | 40.47 | 40.15 | 25.11 | 1.38 | 7.06 | 126.55 | 0.453 | 0.280 | 0.201 | 0.192 | 0.450 |
| 1000 |    | 40.41 | 40.07 | 24.62 | 1.47 | 7.44 | 132.25 | 0.482 | 0.296 | 0.214 | 0.414 | 1.119 |
| 2000 |    | 40.34 | 39.96 | 24.45 | 1.56 | 7.96 | 140.95 | 0.513 | 0.317 | 0.229 | 0.514 | 2.106 |
| 0    | 24 | 42.53 | 42.19 | 22.68 | 1.46 | 8.11 | 102.13 | 0.454 | 0.306 | 0.179 | 0.064 | 0.213 |
| 250  |    | 42.40 | 42.03 | 24.65 | 1.43 | 7.35 | 107.36 | 0.447 | 0.278 | 0.173 | 0.061 | 0.205 |
| 500  |    | 42.27 | 41.88 | 24.81 | 1.46 | 7.53 | 110.98 | 0.458 | 0.286 | 0.178 | 0.147 | 0.222 |
| 1000 |    | 42.18 | 41.75 | 24.67 | 1.54 | 7.70 | 112.81 | 0.484 | 0.294 | 0.182 | 0.314 | 0.642 |
| 2000 |    | 42.07 | 41.61 | 25.12 | 1.64 | 8.16 | 128.36 | 0.517 | 0.313 | 0.203 | 0.302 | 2.280 |
| 0    | 25 | 43.92 | 43.56 | 26.72 | 1.34 | 6.32 | 102.53 | 0.405 | 0.231 | 0.153 | 0.189 | 2.780 |
| 250  |    | 43.79 | 43.39 | 29.84 | 1.32 | 5.52 | 105.89 | 0.399 | 0.202 | 0.141 | 0.140 | 0.929 |
| 500  |    | 43.63 | 43.27 | 30.13 | 1.33 | 5.54 | 107.35 | 0.403 | 0.204 | 0.142 | 0.254 | 0.906 |
| 1000 |    | 43.50 | 43.14 | 29.70 | 1.39 | 5.65 | 107.31 | 0.423 | 0.209 | 0.144 | 0.532 | 1.350 |
| 2000 |    | 43.46 | 42.96 | 30.07 | 1.49 | 5.90 | 113.63 | 0.455 | 0.219 | 0.150 | 0.536 | 1.908 |



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|      |    |       |       |       |      |      |        |       |       |       |       |       |
|------|----|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 26 | 43.21 | 42.90 | 27.78 | 1.23 | 5.77 | 102.94 | 0.376 | 0.214 | 0.147 | 0.098 | 0.434 |
| 250  |    | 43.14 | 42.80 | 30.73 | 1.17 | 5.04 | 104.17 | 0.361 | 0.187 | 0.135 | 0.123 | 0.189 |
| 500  |    | 43.05 | 42.70 | 31.01 | 1.17 | 5.04 | 105.54 | 0.361 | 0.188 | 0.135 | 0.278 | 0.465 |
| 1000 |    | 42.99 | 42.62 | 30.67 | 1.21 | 5.11 | 105.83 | 0.373 | 0.191 | 0.137 | 0.590 | 0.994 |
| 2000 |    | 42.93 | 42.54 | 30.99 | 1.26 | 5.26 | 109.93 | 0.390 | 0.197 | 0.141 | 0.630 | 1.320 |
| 0    | 27 | 43.57 | 43.22 | 25.83 | 1.35 | 6.54 | 102.15 | 0.411 | 0.241 | 0.157 | 0.076 | 0.286 |
| 250  |    | 43.46 | 43.08 | 28.51 | 1.33 | 5.92 | 106.06 | 0.406 | 0.219 | 0.148 | 0.121 | 0.191 |
| 500  |    | 43.33 | 42.92 | 28.70 | 1.36 | 6.02 | 107.91 | 0.415 | 0.223 | 0.150 | 0.217 | 0.396 |
| 1000 |    | 43.22 | 42.77 | 28.30 | 1.43 | 6.24 | 108.51 | 0.439 | 0.232 | 0.153 | 0.414 | 0.779 |
| 2000 |    | 43.10 | 42.62 | 28.27 | 1.51 | 6.52 | 111.48 | 0.466 | 0.243 | 0.157 | 0.434 | 1.060 |
| 0    | 28 | 44.13 | 43.80 | 26.48 | 1.31 | 6.39 | 101.72 | 0.393 | 0.232 | 0.153 | 0.100 | 0.849 |
| 250  |    | 44.05 | 43.70 | 29.47 | 1.25 | 5.55 | 103.65 | 0.377 | 0.202 | 0.140 | 0.130 | 0.410 |
| 500  |    | 43.95 | 43.60 | 29.59 | 1.24 | 5.53 | 103.66 | 0.373 | 0.202 | 0.139 | 0.213 | 0.494 |
| 1000 |    | 43.91 | 43.53 | 29.38 | 1.26 | 5.57 | 103.02 | 0.382 | 0.204 | 0.140 | 0.443 | 0.728 |
| 2000 |    | 43.85 | 43.45 | 29.57 | 1.31 | 5.72 | 105.94 | 0.397 | 0.209 | 0.143 | 0.506 | 0.994 |
| 0    | 29 | 43.55 | 43.18 | 25.87 | 1.42 | 6.71 | 108.00 | 0.432 | 0.247 | 0.166 | 0.097 | 0.666 |
| 250  |    | 43.46 | 43.05 | 29.05 | 1.38 | 5.89 | 113.17 | 0.421 | 0.218 | 0.155 | 0.123 | 0.269 |
| 500  |    | 43.33 | 42.91 | 29.00 | 1.38 | 5.96 | 114.82 | 0.423 | 0.221 | 0.158 | 0.271 | 0.461 |
| 1000 |    | 43.27 | 42.82 | 29.03 | 1.45 | 6.12 | 117.40 | 0.444 | 0.228 | 0.161 | 0.574 | 1.012 |
| 2000 |    | 43.17 | 42.68 | 29.18 | 1.54 | 6.40 | 122.67 | 0.472 | 0.239 | 0.167 | 0.594 | 1.448 |
| 0    | 30 | 44.96 | 44.63 | 26.01 | 1.36 | 7.00 | 108.24 | 0.402 | 0.250 | 0.166 | 0.226 | 0.750 |
| 250  |    | 44.84 | 44.47 | 28.98 | 1.34 | 6.22 | 113.41 | 0.396 | 0.223 | 0.156 | 0.155 | 0.280 |
| 500  |    | 44.72 | 44.34 | 29.01 | 1.35 | 6.33 | 115.24 | 0.400 | 0.227 | 0.158 | 0.197 | 0.599 |
| 1000 |    | 44.66 | 44.25 | 28.72 | 1.41 | 6.48 | 115.91 | 0.418 | 0.233 | 0.161 | 0.374 | 1.515 |
| 2000 |    | 44.58 | 44.13 | 28.78 | 1.48 | 6.73 | 119.63 | 0.441 | 0.243 | 0.165 | 0.402 | 1.760 |
| 0    | 31 | 44.70 | 44.39 | 28.43 | 1.23 | 5.93 | 107.76 | 0.366 | 0.213 | 0.151 | 0.097 | 0.704 |
| 250  |    | 44.63 | 44.30 | 31.97 | 1.17 | 5.13 | 114.39 | 0.347 | 0.184 | 0.142 | 0.110 | 0.295 |
| 500  |    | 44.51 | 44.19 | 32.30 | 1.15 | 5.15 | 118.21 | 0.344 | 0.184 | 0.146 | 0.181 | 0.377 |
| 1000 |    | 44.47 | 44.13 | 32.34 | 1.20 | 5.24 | 121.56 | 0.357 | 0.189 | 0.150 | 0.410 | 0.680 |
| 2000 |    | 44.40 | 44.04 | 32.56 | 1.24 | 5.41 | 126.56 | 0.372 | 0.196 | 0.155 | 0.450 | 0.968 |
| 0    | 32 | 42.94 | 42.58 | 24.23 | 1.50 | 7.63 | 116.06 | 0.464 | 0.285 | 0.191 | 0.080 | 0.393 |
| 250  |    | 42.78 | 42.34 | 26.25 | 1.54 | 7.12 | 119.17 | 0.478 | 0.268 | 0.181 | 0.122 | 0.227 |
| 500  |    | 42.59 | 42.12 | 26.28 | 1.61 | 7.37 | 122.75 | 0.502 | 0.289 | 0.186 | 0.289 | 0.490 |
| 1000 |    | 42.42 | 41.86 | 25.94 | 1.77 | 7.69 | 124.35 | 0.554 | 0.292 | 0.191 | 0.487 | 1.036 |
| 2000 |    | 42.19 | 41.53 | 25.77 | 1.96 | 8.13 | 128.91 | 0.616 | 0.311 | 0.199 | 0.462 | 1.286 |
| 0    | 33 | 43.03 | 42.77 | 26.71 | 1.23 | 6.58 | 120.87 | 0.380 | 0.245 | 0.180 | 0.110 | 0.697 |
| 250  |    | 42.98 | 42.69 | 29.90 | 1.16 | 5.59 | 120.74 | 0.358 | 0.208 | 0.161 | 0.129 | 0.896 |
| 500  |    | 42.88 | 42.60 | 30.31 | 1.14 | 5.53 | 121.80 | 0.354 | 0.207 | 0.160 | 0.311 | 1.053 |
| 1000 |    | 42.85 | 42.54 | 30.26 | 1.17 | 5.51 | 121.10 | 0.363 | 0.206 | 0.159 | 0.638 | 1.535 |
| 2000 |    | 42.80 | 42.47 | 30.49 | 1.21 | 5.64 | 124.52 | 0.376 | 0.211 | 0.162 | 0.686 | 2.080 |
| 0    | 34 | 42.63 | 42.31 | 26.96 | 1.24 | 5.84 | 103.71 | 0.385 | 0.220 | 0.153 | 0.081 | 0.328 |
| 250  |    | 42.54 | 42.21 | 29.82 | 1.19 | 5.09 | 104.58 | 0.372 | 0.192 | 0.140 | 0.108 | 0.179 |
| 500  |    | 42.42 | 42.08 | 30.31 | 1.19 | 5.11 | 107.70 | 0.374 | 0.193 | 0.141 | 0.327 | 0.426 |
| 1000 |    | 42.35 | 41.96 | 29.96 | 1.26 | 5.19 | 107.58 | 0.396 | 0.197 | 0.143 | 0.663 | 1.113 |
| 2000 |    | 42.23 | 41.80 | 30.13 | 1.35 | 5.39 | 112.04 | 0.423 | 0.205 | 0.148 | 0.670 | 1.518 |

|      |       |       |       |      |      |        |       |       |       |       |       |
|------|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 43.44 | 43.44 | 27.44 | 1.41 | 6.40 | 110.33 | 0.436 | 0.256 | 0.165 | 0.073 | 0.233 |
| 250  | 43.47 | 43.53 | 28.41 | 1.40 | 5.86 | 108.20 | 0.340 | 0.214 | 0.152 | 0.099 | 0.131 |
| 500  | 43.44 | 43.39 | 28.73 | 1.29 | 5.19 | 112.43 | 0.305 | 0.219 | 0.156 | 0.178 | 0.296 |
| 1000 | 43.68 | 43.30 | 28.45 | 1.34 | 6.17 | 113.56 | 0.406 | 0.226 | 0.159 | 0.349 | 0.655 |
| 2000 | 43.59 | 43.17 | 28.59 | 1.41 | 6.40 | 110.33 | 0.436 | 0.256 | 0.165 | 0.366 | 0.850 |
| 36   |       |       |       |      |      |        |       |       |       |       |       |
| 0    | 43.40 | 42.67 | 26.04 | 1.23 | 6.16 | 96.00  | 0.379 | 0.220 | 0.147 | 0.143 | 1.994 |
| 250  | 42.86 | 42.50 | 27.95 | 1.23 | 5.54 | 95.28  | 0.302 | 0.208 | 0.136 | 0.127 | 0.861 |
| 500  | 42.71 | 42.33 | 27.88 | 1.29 | 5.65 | 95.85  | 0.375 | 0.213 | 0.137 | 0.244 | 0.943 |
| 1000 | 42.60 | 42.17 | 27.42 | 1.37 | 5.82 | 95.33  | 0.426 | 0.220 | 0.138 | 0.435 | 1.417 |
| 2000 | 42.46 | 41.98 | 27.45 | 1.46 | 6.09 | 99.06  | 0.498 | 0.231 | 0.144 | 0.432 | 1.844 |
| 37   |       |       |       |      |      |        |       |       |       |       |       |
| 0    | 44.99 | 44.73 | 28.80 | 1.14 | 5.71 | 105.68 | 0.333 | 0.203 | 0.146 | 0.091 | 0.536 |
| 250  | 44.92 | 44.65 | 32.54 | 1.05 | 4.88 | 112.06 | 0.310 | 0.174 | 0.137 | 0.093 | 0.260 |
| 500  | 44.83 | 44.57 | 33.10 | 1.03 | 4.85 | 115.54 | 0.305 | 0.173 | 0.139 | 0.174 | 0.378 |
| 1000 | 44.80 | 44.52 | 33.04 | 1.06 | 4.91 | 117.80 | 0.313 | 0.176 | 0.142 | 0.376 | 0.784 |
| 2000 | 44.75 | 44.46 | 33.36 | 1.07 | 5.08 | 123.33 | 0.323 | 0.182 | 0.147 | 0.412 | 1.240 |
| 38   |       |       |       |      |      |        |       |       |       |       |       |
| 0    | 43.44 | 43.15 | 28.21 | 1.15 | 5.55 | 102.08 | 0.351 | 0.205 | 0.144 | 0.352 | 2.250 |
| 250  | 43.38 | 43.08 | 31.30 | 1.10 | 4.78 | 104.24 | 0.337 | 0.177 | 0.133 | 0.134 | 0.729 |
| 500  | 43.27 | 42.96 | 31.71 | 1.11 | 4.81 | 107.41 | 0.340 | 0.178 | 0.135 | 0.276 | 0.956 |
| 1000 | 43.22 | 42.87 | 31.42 | 1.16 | 4.88 | 107.71 | 0.358 | 0.181 | 0.136 | 0.587 | 1.830 |
| 2000 | 43.14 | 42.76 | 31.60 | 1.23 | 5.05 | 112.00 | 0.377 | 0.188 | 0.141 | 0.606 | 2.460 |
| 39   |       |       |       |      |      |        |       |       |       |       |       |
| 0    | 43.57 | 43.20 | 25.52 | 1.42 | 6.87 | 106.36 | 0.432 | 0.253 | 0.166 | 0.081 | 0.386 |
| 250  | 43.47 | 43.09 | 28.46 | 1.38 | 6.06 | 110.01 | 0.422 | 0.224 | 0.154 | 0.110 | 0.286 |
| 500  | 43.35 | 42.94 | 28.68 | 1.39 | 6.13 | 112.17 | 0.424 | 0.227 | 0.156 | 0.328 | 0.449 |
| 1000 | 43.30 | 42.85 | 28.47 | 1.45 | 6.27 | 113.26 | 0.445 | 0.233 | 0.158 | 0.709 | 0.976 |
| 2000 | 43.21 | 42.72 | 28.52 | 1.52 | 6.52 | 117.24 | 0.467 | 0.243 | 0.164 | 0.758 | 1.204 |
| 40   |       |       |       |      |      |        |       |       |       |       |       |
| 0    | 43.54 | 43.23 | 25.83 | 1.27 | 6.51 | 104.11 | 0.388 | 0.240 | 0.160 | 0.204 | 6.600 |
| 250  | 43.43 | 43.08 | 28.18 | 1.27 | 5.87 | 106.68 | 0.387 | 0.217 | 0.151 | 0.144 | 2.090 |
| 500  | 43.29 | 42.92 | 28.26 | 1.30 | 6.02 | 109.35 | 0.399 | 0.223 | 0.154 | 0.238 | 1.619 |
| 1000 | 43.20 | 42.78 | 27.85 | 1.39 | 6.22 | 110.08 | 0.427 | 0.231 | 0.157 | 0.454 | 1.484 |
| 2000 | 43.09 | 42.63 | 27.89 | 1.47 | 6.50 | 114.39 | 0.454 | 0.243 | 0.163 | 0.478 | 1.810 |
| 41   |       |       |       |      |      |        |       |       |       |       |       |
| 0    | 44.79 | 44.44 | 27.89 | 1.27 | 5.92 | 102.05 | 0.378 | 0.212 | 0.146 | 0.111 | 0.754 |
| 250  | 44.65 | 44.27 | 30.67 | 1.27 | 5.34 | 106.65 | 0.378 | 0.192 | 0.138 | 0.100 | 0.314 |
| 500  | 44.47 | 44.05 | 30.39 | 1.34 | 5.64 | 110.32 | 0.399 | 0.204 | 0.144 | 0.231 | 0.503 |
| 1000 | 44.14 | 43.86 | 29.84 | 1.46 | 5.93 | 112.04 | 0.437 | 0.215 | 0.149 | 0.418 | 1.055 |
| 2000 | 44.19 | 43.66 | 29.75 | 1.56 | 6.22 | 116.06 | 0.468 | 0.227 | 0.155 | 0.408 | 1.236 |
| 42   |       |       |       |      |      |        |       |       |       |       |       |
| 0    | 42.56 | 42.66 | 27.59 | 1.23 | 5.68 | 103.08 | 0.379 | 0.212 | 0.149 | 0.069 | 0.244 |
| 250  | 42.91 | 42.57 | 30.66 | 1.18 | 4.93 | 105.82 | 0.365 | 0.184 | 0.137 | 0.084 | 0.154 |
| 500  | 42.79 | 42.45 | 31.09 | 1.17 | 4.93 | 108.68 | 0.363 | 0.185 | 0.139 | 0.195 | 0.285 |
| 1000 | 42.75 | 42.38 | 30.87 | 1.22 | 5.01 | 109.64 | 0.378 | 0.188 | 0.141 | 0.451 | 0.580 |
| 2000 | 42.66 | 42.29 | 31.16 | 1.29 | 5.20 | 114.87 | 0.395 | 0.196 | 0.147 | 0.490 | 0.736 |
| 43   |       |       |       |      |      |        |       |       |       |       |       |
| 0    | 44.10 | 43.87 | 25.52 | 1.29 | 6.93 | 103.90 | 0.387 | 0.252 | 0.162 | 0.082 | 0.344 |
| 250  | 44.02 | 43.68 | 28.23 | 1.27 | 6.16 | 107.42 | 0.382 | 0.224 | 0.151 | 0.087 | 0.172 |
| 500  | 43.89 | 43.51 | 28.41 | 1.31 | 6.34 | 110.48 | 0.396 | 0.232 | 0.155 | 0.198 | 0.378 |
| 1000 | 43.79 | 43.37 | 28.05 | 1.40 | 6.60 | 111.87 | 0.425 | 0.242 | 0.159 | 0.387 | 0.999 |
| 2000 | 43.69 | 43.22 | 28.07 | 1.49 | 6.90 | 115.88 | 0.453 | 0.254 | 0.164 | 0.394 | 1.506 |

|      |    |       |       |       |      |      |        |       |       |       |       |       |
|------|----|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 44 | 42.43 | 42.51 | 25.91 | 1.34 | 6.50 | 107.78 | 0.408 | 0.243 | 0.166 | 0.073 | 0.287 |
| 250  |    | 42.70 | 42.33 | 28.11 | 1.34 | 5.99 | 110.29 | 0.412 | 0.225 | 0.156 | 0.089 | 0.185 |
| 500  |    | 42.54 | 42.14 | 27.98 | 1.39 | 6.30 | 113.57 | 0.413 | 0.238 | 0.162 | 0.282 | 0.424 |
| 1000 |    | 42.42 | 41.96 | 27.55 | 1.52 | 6.61 | 115.40 | 0.474 | 0.251 | 0.167 | 0.531 | 1.015 |
| 2000 |    | 42.28 | 41.75 | 27.47 | 1.63 | 6.95 | 119.61 | 0.513 | 0.265 | 0.173 | 0.516 | 1.184 |
| 0    | 45 | 43.20 | 42.88 | 27.66 | 1.24 | 5.69 | 102.17 | 0.381 | 0.211 | 0.147 | 0.080 | 0.461 |
| 250  |    | 43.13 | 42.79 | 30.63 | 1.18 | 4.90 | 102.85 | 0.362 | 0.182 | 0.134 | 0.085 | 0.182 |
| 500  |    | 43.02 | 42.67 | 31.12 | 1.16 | 4.88 | 105.16 | 0.358 | 0.182 | 0.134 | 0.224 | 0.331 |
| 1000 |    | 42.98 | 42.61 | 30.98 | 1.20 | 4.92 | 105.48 | 0.371 | 0.184 | 0.135 | 0.521 | 0.728 |
| 2000 |    | 42.91 | 42.51 | 31.13 | 1.25 | 5.08 | 108.98 | 0.386 | 0.190 | 0.139 | 0.568 | 0.916 |
| 0    | 46 | 43.20 | 42.87 | 27.47 | 1.28 | 5.89 | 106.07 | 0.393 | 0.219 | 0.154 | 0.068 | 0.291 |
| 250  |    | 43.14 | 42.78 | 30.32 | 1.23 | 5.17 | 108.72 | 0.378 | 0.192 | 0.143 | 0.083 | 0.145 |
| 500  |    | 43.01 | 42.65 | 30.85 | 1.23 | 5.21 | 113.18 | 0.379 | 0.194 | 0.146 | 0.187 | 0.255 |
| 1000 |    | 42.96 | 42.56 | 30.56 | 1.29 | 5.33 | 114.37 | 0.398 | 0.199 | 0.149 | 0.448 | 0.564 |
| 2000 |    | 42.89 | 42.46 | 30.66 | 1.34 | 5.54 | 119.04 | 0.415 | 0.208 | 0.154 | 0.488 | 0.712 |
| 0    | 47 | 44.34 | 43.97 | 26.29 | 1.39 | 6.80 | 107.40 | 0.415 | 0.246 | 0.163 | 0.247 | 5.970 |
| 250  |    | 44.21 | 43.81 | 29.13 | 1.37 | 6.03 | 111.19 | 0.410 | 0.219 | 0.152 | 0.162 | 2.150 |
| 500  |    | 44.06 | 43.65 | 29.03 | 1.40 | 6.20 | 113.56 | 0.420 | 0.226 | 0.156 | 0.250 | 1.771 |
| 1000 |    | 43.98 | 43.51 | 28.70 | 1.49 | 6.44 | 115.29 | 0.449 | 0.235 | 0.160 | 0.439 | 1.768 |
| 2000 |    | 43.86 | 43.35 | 28.63 | 1.57 | 6.73 | 119.18 | 0.476 | 0.247 | 0.166 | 0.436 | 1.926 |
| 0    | 48 | 44.36 | 44.03 | 28.55 | 1.21 | 5.64 | 102.25 | 0.362 | 0.204 | 0.142 | 0.071 | 0.268 |
| 250  |    | 44.26 | 43.91 | 31.41 | 1.18 | 5.01 | 107.25 | 0.354 | 0.181 | 0.136 | 0.080 | 0.145 |
| 500  |    | 44.12 | 43.77 | 31.84 | 1.20 | 5.15 | 113.66 | 0.362 | 0.187 | 0.142 | 0.282 | 0.303 |
| 1000 |    | 44.05 | 43.65 | 31.58 | 1.28 | 5.36 | 117.78 | 0.387 | 0.196 | 0.148 | 0.458 | 0.782 |
| 2000 |    | 43.95 | 43.52 | 31.59 | 1.36 | 5.61 | 123.23 | 0.410 | 0.205 | 0.155 | 0.466 | 1.082 |

\*\*\* SPRAGUE ELECTRO SURGE CURRENT TEST PROGRAM \*\*\*

--- SURGE CURRENT SCREENED UNITS ---

11/14/79

1111151 -- 85C. RESULTS

| UNIT |      | CAPACITANCE (uf)--- |       |       |       | DISSIPATION FACTOR (Z)- |        |       |       | FIR (OHMS) |       |       | DCI (uA)--- |     | FUSE |  |
|------|------|---------------------|-------|-------|-------|-------------------------|--------|-------|-------|------------|-------|-------|-------------|-----|------|--|
| ROOM | NO.  | 120Hz               | 1KHz  | 40KHz | 120Hz | 18Hz                    | 40KHz  | 120Hz | 1KHz  | 40KHz      | 25C   | 85C   | 25C         | 85C | ROOM |  |
| 0    | 1    | 43.44               | 42.98 | 27.52 | 1.28  | 5.74                    | 96.02  | 0.391 | 0.213 | 0.139      | 0.102 | 0.855 |             |     |      |  |
|      | 250  | 43.37               | 42.99 | 28.31 | 1.29  | 5.53                    | 96.30  | 0.394 | 0.205 | 0.135      | 0.122 | 0.860 |             |     |      |  |
|      | 500  | 43.39               | 42.92 | 28.00 | 1.29  | 5.60                    | 96.41  | 0.394 | 0.208 | 0.137      | 0.081 | 0.825 |             |     |      |  |
|      | 1000 | 43.27               | 42.90 | 28.40 | 1.26  | 5.47                    | 96.29  | 0.385 | 0.203 | 0.135      | 0.103 | 0.848 |             |     |      |  |
|      | 2000 | 43.22               | 42.85 | 28.49 | 1.26  | 5.40                    | 95.69  | 0.387 | 0.200 | 0.134      | 0.080 | 0.814 |             |     |      |  |
| 0    | 2    | 43.52               | 43.27 | 26.50 | 1.16  | 6.35                    | 108.91 | 0.354 | 0.234 | 0.164      | 0.134 | 2.530 |             |     |      |  |
|      | 250  | 43.53               | 43.28 | 27.34 | 1.16  | 6.11                    | 110.28 | 0.352 | 0.225 | 0.160      | 0.124 | 1.865 |             |     |      |  |
|      | 500  | 43.49               | 43.23 | 26.92 | 1.16  | 6.21                    | 110.12 | 0.355 | 0.229 | 0.163      | 0.091 | 1.933 |             |     |      |  |
|      | 1000 | 43.46               | 43.22 | 27.21 | 1.14  | 6.12                    | 110.74 | 0.347 | 0.225 | 0.162      | 0.107 | 1.981 |             |     |      |  |
|      | 2000 | 43.43               | 43.18 | 27.33 | 1.14  | 6.10                    | 111.90 | 0.350 | 0.225 | 0.163      | 0.110 | 2.560 |             |     |      |  |
| 0    | 3    | 43.89               | 42.78 | 27.08 | 1.28  | 6.18                    | 110.28 | 0.395 | 0.230 | 0.162      | 0.146 | 1.180 |             |     |      |  |
|      | 250  | 43.12               | 42.79 | 27.99 | 1.28  | 5.92                    | 110.81 | 0.395 | 0.220 | 0.158      | 0.138 | 0.896 |             |     |      |  |
|      | 500  | 43.06               | 42.74 | 27.65 | 1.28  | 5.97                    | 110.63 | 0.394 | 0.222 | 0.159      | 0.099 | 0.871 |             |     |      |  |
|      | 1000 | 43.03               | 42.71 | 27.94 | 1.24  | 5.82                    | 109.55 | 0.381 | 0.217 | 0.156      | 0.107 | 0.828 |             |     |      |  |
|      | 2000 | 42.98               | 42.66 | 28.16 | 1.24  | 5.73                    | 109.41 | 0.383 | 0.214 | 0.155      | 0.104 | 0.900 |             |     |      |  |
| 0    | 4    | 43.51               | 43.16 | 26.78 | 1.33  | 6.25                    | 103.95 | 0.406 | 0.230 | 0.154      | 0.103 | 0.232 |             |     |      |  |
|      | 250  | 43.54               | 43.17 | 27.70 | 1.34  | 5.95                    | 104.19 | 0.407 | 0.220 | 0.150      | 0.188 | 0.377 |             |     |      |  |
|      | 500  | 43.46               | 43.10 | 27.35 | 1.32  | 6.01                    | 104.07 | 0.404 | 0.222 | 0.151      | 0.078 | 0.352 |             |     |      |  |
|      | 1000 | 43.43               | 43.07 | 27.72 | 1.29  | 5.89                    | 104.17 | 0.393 | 0.218 | 0.150      | 0.085 | 0.373 |             |     |      |  |
|      | 2000 | 43.38               | 43.03 | 27.94 | 1.29  | 5.83                    | 105.04 | 0.395 | 0.216 | 0.150      | 0.074 | 0.384 |             |     |      |  |
| 0    | 5    | 44.01               | 43.71 | 27.84 | 1.16  | 5.78                    | 95.56  | 0.350 | 0.211 | 0.137      | 0.088 | 0.335 |             |     |      |  |
|      | 250  | 44.03               | 43.72 | 28.72 | 1.16  | 5.54                    | 95.97  | 0.349 | 0.202 | 0.133      | 0.099 | 0.304 |             |     |      |  |
|      | 500  | 43.97               | 43.67 | 28.40 | 1.15  | 5.58                    | 95.25  | 0.348 | 0.204 | 0.133      | 0.064 | 0.272 |             |     |      |  |
|      | 1000 | 43.94               | 43.64 | 28.72 | 1.13  | 5.48                    | 95.03  | 0.340 | 0.200 | 0.132      | 0.078 | 0.280 |             |     |      |  |
|      | 2000 | 43.90               | 43.60 | 28.80 | 1.14  | 5.43                    | 94.32  | 0.344 | 0.198 | 0.130      | 0.067 | 0.230 |             |     |      |  |
| 0    | 6    | 43.26               | 42.90 | 25.99 | 1.37  | 6.44                    | 106.05 | 0.421 | 0.239 | 0.162      | 0.149 | 2.200 |             |     |      |  |
|      | 250  | 43.29               | 42.92 | 26.93 | 1.38  | 6.16                    | 107.15 | 0.422 | 0.228 | 0.158      | 0.138 | 1.856 |             |     |      |  |
|      | 500  | 43.22               | 42.86 | 26.66 | 1.37  | 6.19                    | 107.13 | 0.420 | 0.230 | 0.160      | 0.096 | 1.646 |             |     |      |  |
|      | 1000 | 43.19               | 42.83 | 27.77 | 1.32  | 6.06                    | 106.73 | 0.407 | 0.225 | 0.158      | 0.112 | 1.688 |             |     |      |  |
|      | 2000 | 43.15               | 42.79 | 27.16 | 1.33  | 5.98                    | 107.58 | 0.409 | 0.223 | 0.158      | 0.115 | 2.188 |             |     |      |  |
| 0    | 7    | 43.55               | 43.06 | 24.26 | 1.29  | 7.23                    | 99.29  | 0.395 | 0.267 | 0.163      | 0.084 | 0.191 |             |     |      |  |
|      | 250  | 43.56               | 43.06 | 24.93 | 1.28  | 6.90                    | 99.51  | 0.391 | 0.255 | 0.159      | 0.087 | 0.224 |             |     |      |  |
|      | 500  | 43.51               | 43.02 | 24.65 | 1.28  | 6.99                    | 99.69  | 0.392 | 0.259 | 0.161      | 0.053 | 0.199 |             |     |      |  |
|      | 1000 | 43.48               | 42.99 | 24.94 | 1.24  | 6.86                    | 100.03 | 0.381 | 0.254 | 0.160      | 0.068 | 0.209 |             |     |      |  |
|      | 2000 | 43.45               | 42.95 | 25.07 | 1.26  | 6.81                    | 100.70 | 0.385 | 0.252 | 0.160      | 0.057 | 0.160 |             |     |      |  |

2000 2000 2000

|      |       |       |       |      |      |        |       |       |       |       |       |
|------|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 44.74 | 44.39 | 26.76 | 1.27 | 5.48 | 103.95 | 0.376 | 0.209 | 0.144 | 0.082 | 0.224 |
| 250  | 44.77 | 44.41 | 29.62 | 1.26 | 5.63 | 105.27 | 0.380 | 0.207 | 0.141 | 0.100 | 0.281 |
| 500  | 44.70 | 44.35 | 29.20 | 1.27 | 5.65 | 104.69 | 0.376 | 0.203 | 0.143 | 0.070 | 0.297 |
| 1000 | 44.67 | 44.33 | 29.49 | 1.23 | 5.56 | 104.93 | 0.368 | 0.200 | 0.142 | 0.095 | 0.328 |
| 2000 | 44.63 | 44.28 | 29.83 | 1.24 | 5.49 | 105.66 | 0.370 | 0.197 | 0.142 | 0.080 | 0.322 |
| 0    | 42.83 | 42.51 | 25.42 | 1.31 | 6.74 | 105.09 | 0.407 | 0.252 | 0.164 | 0.098 | 0.707 |
| 250  | 42.83 | 42.50 | 26.22 | 1.32 | 6.46 | 105.88 | 0.408 | 0.242 | 0.161 | 0.103 | 0.587 |
| 500  | 42.77 | 42.45 | 25.92 | 1.31 | 6.54 | 106.29 | 0.408 | 0.245 | 0.163 | 0.085 | 0.528 |
| 1000 | 42.74 | 42.42 | 26.18 | 1.26 | 6.42 | 106.44 | 0.396 | 0.241 | 0.162 | 0.081 | 0.574 |
| 2000 | 42.70 | 42.38 | 26.42 | 1.28 | 6.37 | 107.58 | 0.399 | 0.239 | 0.162 | 0.071 | 0.510 |
| 0    | 42.38 | 42.10 | 24.11 | 1.26 | 7.13 | 106.12 | 0.401 | 0.270 | 0.175 | 0.085 | 0.887 |
| 250  | 42.37 | 42.08 | 24.72 | 1.29 | 6.86 | 106.77 | 0.403 | 0.260 | 0.172 | 0.087 | 0.536 |
| 500  | 42.32 | 42.03 | 24.37 | 1.29 | 6.98 | 106.68 | 0.404 | 0.264 | 0.174 | 0.057 | 0.620 |
| 1000 | 42.28 | 42.00 | 24.56 | 1.26 | 6.87 | 106.43 | 0.395 | 0.260 | 0.172 | 0.066 | 0.556 |
| 2000 | 42.25 | 41.96 | 24.67 | 1.27 | 6.82 | 106.93 | 0.398 | 0.259 | 0.172 | 0.062 | 0.606 |
| 0    | 41.34 | 41.09 | 24.94 | 1.21 | 6.54 | 109.72 | 0.390 | 0.253 | 0.175 | 0.080 | 0.240 |
| 250  | 41.34 | 41.08 | 25.65 | 1.21 | 6.26 | 109.90 | 0.387 | 0.242 | 0.170 | 0.084 | 0.247 |
| 500  | 41.29 | 41.03 | 25.43 | 1.21 | 6.34 | 110.70 | 0.388 | 0.246 | 0.173 | 0.050 | 0.218 |
| 1000 | 41.26 | 41.00 | 25.69 | 1.18 | 6.23 | 110.58 | 0.378 | 0.242 | 0.171 | 0.058 | 0.229 |
| 2000 | 41.22 | 40.96 | 25.80 | 1.19 | 6.19 | 111.04 | 0.382 | 0.240 | 0.171 | 0.054 | 0.186 |
| 0    | 39.97 | 39.68 | 21.81 | 1.37 | 7.60 | 103.95 | 0.456 | 0.305 | 0.190 | 0.079 | 0.148 |
| 250  | 39.96 | 39.67 | 22.31 | 1.36 | 7.28 | 103.80 | 0.451 | 0.292 | 0.185 | 0.079 | 0.192 |
| 500  | 39.91 | 39.62 | 22.12 | 1.37 | 7.40 | 104.67 | 0.455 | 0.297 | 0.188 | 0.048 | 0.163 |
| 1000 | 39.87 | 39.58 | 22.29 | 1.34 | 7.29 | 104.77 | 0.446 | 0.293 | 0.187 | 0.069 | 0.176 |
| 2000 | 39.83 | 39.54 | 22.39 | 1.35 | 7.25 | 105.83 | 0.451 | 0.292 | 0.188 | 0.054 | 0.122 |
| 0    | 39.95 | 39.61 | 22.16 | 1.48 | 7.64 | 104.72 | 0.490 | 0.307 | 0.188 | 0.077 | 0.170 |
| 250  | 39.96 | 39.61 | 22.65 | 1.47 | 7.35 | 104.16 | 0.489 | 0.295 | 0.183 | 0.083 | 0.229 |
| 500  | 39.91 | 39.56 | 22.37 | 1.47 | 7.46 | 104.52 | 0.489 | 0.300 | 0.186 | 0.054 | 0.200 |
| 1000 | 39.88 | 39.54 | 22.56 | 1.43 | 7.36 | 104.95 | 0.477 | 0.296 | 0.185 | 0.073 | 0.219 |
| 2000 | 39.84 | 39.50 | 22.64 | 1.45 | 7.32 | 105.82 | 0.482 | 0.295 | 0.186 | 0.058 | 0.158 |
| 0    | 41.49 | 41.16 | 23.17 | 1.46 | 7.62 | 116.57 | 0.466 | 0.295 | 0.200 | 0.074 | 0.165 |
| 250  | 41.48 | 41.16 | 23.79 | 1.43 | 7.34 | 117.46 | 0.459 | 0.284 | 0.196 | 0.085 | 0.236 |
| 500  | 41.43 | 41.11 | 23.40 | 1.45 | 7.44 | 117.20 | 0.463 | 0.288 | 0.199 | 0.052 | 0.213 |
| 1000 | 41.40 | 41.08 | 23.63 | 1.41 | 7.33 | 117.71 | 0.452 | 0.284 | 0.198 | 0.065 | 0.233 |
| 2000 | 41.37 | 41.05 | 23.73 | 1.42 | 7.28 | 118.53 | 0.455 | 0.282 | 0.199 | 0.056 | 0.168 |
| 0    | 40.47 | 40.12 | 23.16 | 1.43 | 7.22 | 98.16  | 0.470 | 0.287 | 0.169 | 0.110 | 0.498 |
| 250  | 40.48 | 40.12 | 23.77 | 1.42 | 6.90 | 98.22  | 0.466 | 0.274 | 0.164 | 0.104 | 0.501 |
| 500  | 40.42 | 40.07 | 23.44 | 1.42 | 6.95 | 97.51  | 0.467 | 0.276 | 0.166 | 0.066 | 0.459 |
| 1000 | 40.39 | 40.04 | 23.67 | 1.37 | 6.81 | 97.47  | 0.452 | 0.271 | 0.164 | 0.073 | 0.499 |
| 2000 | 40.35 | 40.00 | 23.74 | 1.38 | 6.74 | 97.65  | 0.455 | 0.268 | 0.164 | 0.073 | 0.484 |
| 0    | 40.63 | 40.34 | 22.62 | 1.36 | 7.63 | 105.58 | 0.445 | 0.301 | 0.186 | 0.067 | 0.123 |
| 250  | 40.63 | 40.33 | 23.21 | 1.35 | 7.33 | 105.74 | 0.442 | 0.289 | 0.181 | 0.073 | 0.158 |
| 500  | 40.58 | 40.29 | 22.93 | 1.36 | 7.42 | 105.41 | 0.444 | 0.293 | 0.183 | 0.047 | 0.143 |
| 1000 | 40.55 | 40.26 | 23.17 | 1.32 | 7.28 | 105.20 | 0.433 | 0.288 | 0.181 | 0.058 | 0.150 |
| 2000 | 40.52 | 40.22 | 23.29 | 1.33 | 7.20 | 105.01 | 0.434 | 0.285 | 0.179 | 0.050 | 0.108 |

|      |    |       |       |       |      |      |        |       |       |       |       |       |
|------|----|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 17 | 41.50 | 41.24 | 24.15 | 1.15 | 6.11 | 99.15  | 0.551 | 0.245 | 0.160 | 0.081 | 0.151 |
| 250  |    | 41.50 | 41.23 | 25.14 | 1.16 | 6.11 | 100.40 | 0.555 | 0.236 | 0.156 | 0.079 | 0.156 |
| 500  |    | 41.45 | 41.19 | 25.31 | 1.13 | 6.15 | 99.36  | 0.577 | 0.236 | 0.156 | 0.048 | 0.157 |
| 1000 |    | 41.41 | 41.15 | 25.56 | 1.14 | 6.07 | 98.97  | 0.566 | 0.233 | 0.154 | 0.055 | 0.160 |
| 2000 |    | 41.38 | 41.12 | 25.69 | 1.15 | 5.96 | 98.77  | 0.569 | 0.231 | 0.153 | 0.049 | 0.118 |
| 0    | 18 | 42.06 | 41.77 | 24.05 | 1.30 | 7.00 | 104.56 | 0.410 | 0.267 | 0.173 | 0.174 | 4.578 |
| 250  |    | 42.05 | 41.75 | 24.77 | 1.30 | 6.73 | 105.67 | 0.405 | 0.257 | 0.170 | 0.130 | 2.930 |
| 500  |    | 41.70 | 41.43 | 24.43 | 1.30 | 6.87 | 105.47 | 0.411 | 0.260 | 0.172 | 0.099 | 2.950 |
| 1000 |    | 41.96 | 41.67 | 24.67 | 1.27 | 6.71 | 105.55 | 0.400 | 0.256 | 0.170 | 0.103 | 2.580 |
| 2000 |    | 41.93 | 41.64 | 24.88 | 1.27 | 6.65 | 106.86 | 0.403 | 0.254 | 0.171 | 0.114 | 2.940 |
| 0    | 19 | 41.63 | 41.28 | 24.38 | 1.42 | 7.09 | 107.04 | 0.454 | 0.271 | 0.175 | 0.116 | 1.520 |
| 250  |    | 41.63 | 41.27 | 25.04 | 1.43 | 6.86 | 108.34 | 0.455 | 0.264 | 0.172 | 0.112 | 1.066 |
| 500  |    | 41.57 | 41.21 | 24.69 | 1.43 | 6.93 | 108.00 | 0.456 | 0.268 | 0.174 | 0.086 | 1.072 |
| 1000 |    | 41.53 | 41.18 | 24.92 | 1.40 | 6.85 | 108.59 | 0.446 | 0.265 | 0.173 | 0.096 | 0.967 |
| 2000 |    | 41.49 | 41.14 | 24.98 | 1.41 | 6.80 | 108.68 | 0.451 | 0.263 | 0.173 | 0.093 | 1.078 |
| 0    | 20 | 40.91 | 40.65 | 23.47 | 1.35 | 7.34 | 113.17 | 0.436 | 0.287 | 0.192 | 0.077 | 0.151 |
| 250  |    | 40.91 | 40.64 | 24.10 | 1.33 | 7.01 | 112.67 | 0.432 | 0.275 | 0.186 | 0.077 | 0.180 |
| 500  |    | 40.88 | 40.60 | 23.90 | 1.33 | 7.13 | 114.36 | 0.433 | 0.280 | 0.190 | 0.047 | 0.151 |
| 1000 |    | 40.84 | 40.56 | 24.09 | 1.30 | 7.04 | 115.05 | 0.422 | 0.276 | 0.190 | 0.054 | 0.160 |
| 2000 |    | 40.81 | 40.53 | 24.26 | 1.31 | 7.01 | 116.99 | 0.427 | 0.275 | 0.192 | 0.049 | 0.106 |
| 0    | 21 | 40.77 | 40.45 | 24.12 | 1.32 | 6.54 | 98.96  | 0.430 | 0.257 | 0.163 | 0.099 | 0.763 |
| 250  |    | 40.77 | 40.44 | 24.75 | 1.32 | 6.20 | 99.00  | 0.431 | 0.247 | 0.159 | 0.092 | 0.584 |
| 500  |    | 40.71 | 40.38 | 24.50 | 1.32 | 6.33 | 98.91  | 0.429 | 0.250 | 0.161 | 0.061 | 0.543 |
| 1000 |    | 40.67 | 40.35 | 24.70 | 1.28 | 6.22 | 98.48  | 0.418 | 0.246 | 0.159 | 0.072 | 0.584 |
| 2000 |    | 40.63 | 40.30 | 24.83 | 1.30 | 6.17 | 98.84  | 0.423 | 0.244 | 0.158 | 0.067 | 0.582 |
| 0    | 22 | 42.40 | 42.14 | 25.37 | 1.21 | 6.49 | 108.80 | 0.378 | 0.245 | 0.171 | 0.082 | 0.153 |
| 250  |    | 42.40 | 42.14 | 26.09 | 1.19 | 6.19 | 109.05 | 0.374 | 0.234 | 0.166 | 0.075 | 0.107 |
| 500  |    | 42.35 | 42.10 | 25.92 | 1.18 | 6.24 | 109.68 | 0.371 | 0.236 | 0.168 | 0.046 | 0.152 |
| 1000 |    | 42.32 | 42.07 | 26.17 | 1.15 | 6.12 | 109.50 | 0.359 | 0.232 | 0.166 | 0.064 | 0.163 |
| 2000 |    | 42.30 | 42.05 | 26.34 | 1.15 | 6.06 | 110.10 | 0.362 | 0.229 | 0.166 | 0.048 | 0.110 |
| 0    | 23 | 40.36 | 40.07 | 21.60 | 1.39 | 7.01 | 101.26 | 0.457 | 0.310 | 0.187 | 0.116 | 0.145 |
| 250  |    | 40.36 | 40.07 | 22.30 | 1.36 | 7.41 | 101.64 | 0.446 | 0.295 | 0.182 | 0.098 | 0.245 |
| 500  |    | 40.31 | 40.02 | 22.15 | 1.36 | 7.36 | 102.10 | 0.447 | 0.297 | 0.183 | 0.055 | 0.195 |
| 1000 |    | 40.26 | 39.98 | 22.38 | 1.31 | 7.29 | 102.09 | 0.432 | 0.290 | 0.182 | 0.055 | 0.186 |
| 2000 |    | 40.23 | 39.95 | 22.51 | 1.31 | 7.22 | 102.67 | 0.433 | 0.288 | 0.181 | 0.048 | 0.120 |
| 0    | 24 | 40.24 | 39.90 | 23.07 | 1.44 | 7.31 | 103.08 | 0.475 | 0.292 | 0.178 | 0.069 | 0.551 |
| 250  |    | 40.25 | 39.91 | 23.57 | 1.43 | 7.06 | 103.24 | 0.471 | 0.282 | 0.174 | 0.079 | 0.494 |
| 500  |    | 40.20 | 39.86 | 23.30 | 1.43 | 7.15 | 103.41 | 0.471 | 0.285 | 0.177 | 0.055 | 0.486 |
| 1000 |    | 40.17 | 39.84 | 23.40 | 1.38 | 7.03 | 102.51 | 0.455 | 0.281 | 0.174 | 0.084 | 0.545 |
| 2000 |    | 40.15 | 39.81 | 23.56 | 1.40 | 6.97 | 103.25 | 0.461 | 0.278 | 0.174 | 0.063 | 0.526 |
| 0    | 25 | 41.06 | 41.56 | 25.34 | 1.28 | 6.40 | 105.74 | 0.405 | 0.245 | 0.166 | 0.091 | 0.280 |
| 250  |    | 41.83 | 41.53 | 25.87 | 1.26 | 6.18 | 105.93 | 0.399 | 0.237 | 0.163 | 0.059 | 0.242 |
| 500  |    | 41.81 | 41.51 | 25.70 | 1.26 | 6.20 | 105.88 | 0.400 | 0.238 | 0.164 | 0.061 | 0.182 |
| 1000 |    | 41.76 | 41.47 | 25.87 | 1.23 | 6.14 | 106.34 | 0.391 | 0.236 | 0.164 | 0.069 | 0.242 |
| 2000 |    | 41.75 | 41.45 | 26.05 | 1.24 | 6.04 | 106.26 | 0.394 | 0.232 | 0.162 | 0.062 | 0.146 |

|      |    |       |       |       |       |      |        |       |       |       |       |       |
|------|----|-------|-------|-------|-------|------|--------|-------|-------|-------|-------|-------|
| 0    | 26 | 40.56 | 40.26 | 23.30 | 1.10  | 7.45 | 100.00 | 0.47  | 0.278 | 0.171 | 0.114 | 0.276 |
| 250  |    | 40.54 | 40.25 | 23.87 | 1.12  | 6.73 | 100.40 | 0.474 | 0.268 | 0.167 | 0.065 | 0.225 |
| 500  |    | 40.51 | 40.23 | 23.74 | 1.127 | 6.78 | 100.89 | 0.417 | 0.268 | 0.168 | 0.066 | 0.186 |
| 1000 |    | 40.45 | 40.18 | 23.80 | 1.124 | 6.76 | 99.54  | 0.407 | 0.266 | 0.166 | 0.063 | 0.184 |
| 2000 |    | 40.44 | 40.16 | 23.93 | 1.125 | 6.68 | 99.65  | 0.410 | 0.262 | 0.165 | 0.057 | 0.132 |
| 0    | 27 | 41.25 | 40.95 | 24.01 | 1.130 | 6.87 | 99.73  | 0.418 | 0.267 | 0.165 | 0.116 | 0.473 |
| 250  |    | 41.23 | 40.93 | 24.62 | 1.128 | 6.60 | 100.22 | 0.411 | 0.257 | 0.162 | 0.066 | 0.330 |
| 500  |    | 41.19 | 40.90 | 24.56 | 1.128 | 6.64 | 100.93 | 0.412 | 0.258 | 0.164 | 0.063 | 0.273 |
| 1000 |    | 41.14 | 40.85 | 24.61 | 1.125 | 6.55 | 100.16 | 0.402 | 0.255 | 0.162 | 0.069 | 0.273 |
| 2000 |    | 41.13 | 40.83 | 24.88 | 1.126 | 6.45 | 100.76 | 0.406 | 0.251 | 0.161 | 0.063 | 0.244 |
| 0    | 28 | 42.67 | 42.40 | 26.20 | 1.121 | 6.24 | 100.30 | 0.377 | 0.234 | 0.164 | 0.093 | 0.350 |
| 250  |    | 42.66 | 42.39 | 26.92 | 1.119 | 6.00 | 100.00 | 0.370 | 0.225 | 0.161 | 0.060 | 0.249 |
| 500  |    | 42.62 | 42.36 | 26.65 | 1.118 | 6.00 | 100.22 | 0.369 | 0.226 | 0.162 | 0.061 | 0.216 |
| 1000 |    | 42.58 | 42.32 | 26.89 | 1.115 | 5.92 | 100.57 | 0.358 | 0.223 | 0.161 | 0.066 | 0.219 |
| 2000 |    | 42.57 | 42.31 | 27.22 | 1.116 | 5.81 | 100.17 | 0.361 | 0.219 | 0.160 | 0.063 | 0.180 |
| 0    | 29 | 40.60 | 40.26 | 22.73 | 1.145 | 7.36 | 100.95 | 0.474 | 0.291 | 0.172 | 0.117 | 0.573 |
| 250  |    | 40.59 | 40.24 | 23.25 | 1.142 | 7.05 | 100.86 | 0.463 | 0.279 | 0.173 | 0.071 | 0.399 |
| 500  |    | 40.55 | 40.21 | 23.14 | 1.141 | 7.07 | 101.05 | 0.463 | 0.280 | 0.174 | 0.067 | 0.343 |
| 1000 |    | 40.50 | 40.16 | 23.21 | 1.138 | 6.98 | 100.54 | 0.452 | 0.277 | 0.172 | 0.074 | 0.354 |
| 2000 |    | 40.48 | 40.15 | 23.39 | 1.138 | 6.87 | 100.55 | 0.454 | 0.272 | 0.171 | 0.069 | 0.320 |
| 0    | 30 | 41.41 | 41.15 | 24.43 | 1.121 | 6.52 | 101.53 | 0.389 | 0.252 | 0.165 | 0.087 | 0.312 |
| 250  |    | 41.39 | 41.13 | 25.12 | 1.119 | 6.26 | 102.52 | 0.382 | 0.242 | 0.162 | 0.054 | 0.225 |
| 500  |    | 41.35 | 41.10 | 24.96 | 1.119 | 6.29 | 102.68 | 0.381 | 0.243 | 0.164 | 0.054 | 0.191 |
| 1000 |    | 41.31 | 41.06 | 25.11 | 1.115 | 6.20 | 102.80 | 0.371 | 0.241 | 0.163 | 0.066 | 0.202 |
| 2000 |    | 41.30 | 41.04 | 25.31 | 1.116 | 6.10 | 103.05 | 0.373 | 0.237 | 0.162 | 0.054 | 0.154 |
| 0    | 31 | 40.02 | 39.74 | 23.64 | 1.128 | 6.61 | 104.48 | 0.405 | 0.265 | 0.176 | 0.132 | 1.932 |
| 250  |    | 40.01 | 39.73 | 24.24 | 1.126 | 6.37 | 104.93 | 0.419 | 0.255 | 0.172 | 0.086 | 1.290 |
| 500  |    | 39.98 | 39.70 | 24.11 | 1.126 | 6.41 | 105.66 | 0.420 | 0.257 | 0.174 | 0.082 | 1.229 |
| 1000 |    | 39.94 | 39.66 | 24.16 | 1.123 | 6.31 | 104.27 | 0.409 | 0.253 | 0.172 | 0.099 | 1.147 |
| 2000 |    | 39.92 | 39.64 | 24.34 | 1.124 | 6.22 | 104.73 | 0.413 | 0.250 | 0.171 | 0.095 | 1.366 |
| 0    | 32 | 46.26 | 45.93 | 30.48 | 1.117 | 5.39 | 101.95 | 0.337 | 0.187 | 0.133 | 0.070 | 0.284 |
| 250  |    | 46.25 | 45.92 | 31.22 | 1.116 | 5.22 | 102.85 | 0.334 | 0.181 | 0.131 | 0.056 | 0.181 |
| 500  |    | 46.20 | 45.88 | 30.97 | 1.116 | 5.25 | 103.05 | 0.334 | 0.182 | 0.132 | 0.061 | 0.175 |
| 1000 |    | 46.16 | 45.84 | 31.37 | 1.114 | 5.23 | 105.12 | 0.327 | 0.182 | 0.133 | 0.076 | 0.193 |
| 2000 |    | 46.13 | 45.81 | 31.47 | 1.114 | 5.09 | 103.39 | 0.328 | 0.177 | 0.131 | 0.062 | 0.152 |
| 0    | 33 | 42.06 | 41.81 | 25.68 | 1.119 | 6.43 | 106.86 | 0.376 | 0.245 | 0.166 | 0.085 | 0.363 |
| 250  |    | 42.05 | 41.79 | 26.31 | 1.117 | 6.19 | 107.30 | 0.370 | 0.236 | 0.162 | 0.059 | 0.298 |
| 500  |    | 42.01 | 41.76 | 26.13 | 1.117 | 6.23 | 107.70 | 0.370 | 0.238 | 0.164 | 0.060 | 0.272 |
| 1000 |    | 41.97 | 41.73 | 26.26 | 1.114 | 6.15 | 107.46 | 0.360 | 0.235 | 0.163 | 0.072 | 0.281 |
| 2000 |    | 41.96 | 41.71 | 26.54 | 1.115 | 6.07 | 108.50 | 0.363 | 0.232 | 0.163 | 0.061 | 0.248 |
| 0    | 34 | 42.24 | 41.96 | 26.02 | 1.125 | 6.35 | 112.66 | 0.391 | 0.241 | 0.172 | 0.078 | 0.232 |
| 250  |    | 42.22 | 41.95 | 26.80 | 1.123 | 6.12 | 113.90 | 0.385 | 0.232 | 0.169 | 0.052 | 0.172 |
| 500  |    | 42.19 | 41.91 | 26.46 | 1.122 | 6.16 | 113.59 | 0.384 | 0.234 | 0.171 | 0.054 | 0.153 |
| 1000 |    | 42.15 | 41.88 | 26.60 | 1.119 | 6.08 | 113.39 | 0.375 | 0.231 | 0.170 | 0.064 | 0.163 |
| 2000 |    | 42.12 | 41.85 | 26.93 | 1.120 | 6.01 | 115.00 | 0.378 | 0.229 | 0.170 | 0.053 | 0.122 |

|      |    |       |       |       |      |      |        |       |       |       |       |       |
|------|----|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 35 | 41.03 | 40.74 | 24.84 | 1.30 | 6.55 | 102.76 | 0.421 | 0.256 | 0.176 | 0.188 | 1.103 |
| 250  |    | 41.01 | 40.72 | 25.56 | 1.27 | 6.24 | 109.19 | 0.411 | 0.244 | 0.170 | 0.145 | 0.991 |
| 500  |    | 40.97 | 40.68 | 25.32 | 1.25 | 6.32 | 110.19 | 0.412 | 0.247 | 0.173 | 0.138 | 0.923 |
| 1000 |    | 40.92 | 40.64 | 25.44 | 1.24 | 6.23 | 109.66 | 0.403 | 0.244 | 0.172 | 0.147 | 0.893 |
| 2000 |    | 40.90 | 40.61 | 25.65 | 1.25 | 6.18 | 110.82 | 0.407 | 0.242 | 0.172 | 0.145 | 0.938 |
| 0    | 36 | 41.43 | 41.18 | 25.20 | 1.19 | 6.29 | 107.07 | 0.382 | 0.243 | 0.169 | 0.073 | 0.269 |
| 250  |    | 41.43 | 41.18 | 25.94 | 1.17 | 6.06 | 107.67 | 0.373 | 0.234 | 0.165 | 0.053 | 0.210 |
| 500  |    | 41.39 | 41.15 | 25.69 | 1.16 | 6.09 | 107.12 | 0.372 | 0.235 | 0.166 | 0.053 | 0.187 |
| 1000 |    | 41.36 | 41.12 | 25.85 | 1.13 | 5.98 | 106.44 | 0.362 | 0.232 | 0.164 | 0.055 | 0.190 |
| 2000 |    | 41.35 | 41.10 | 26.13 | 1.13 | 5.87 | 106.62 | 0.351 | 0.227 | 0.162 | 0.053 | 0.150 |
| 0    | 37 | 44.44 | 44.10 | 27.79 | 1.25 | 5.97 | 103.38 | 0.374 | 0.215 | 0.148 | 0.097 | 1.153 |
| 250  |    | 44.44 | 44.11 | 28.43 | 1.24 | 5.79 | 103.92 | 0.370 | 0.209 | 0.145 | 0.078 | 0.896 |
| 500  |    | 44.40 | 44.07 | 28.27 | 1.23 | 5.81 | 104.18 | 0.368 | 0.210 | 0.147 | 0.074 | 0.829 |
| 1000 |    | 44.37 | 44.04 | 28.44 | 1.20 | 5.70 | 103.42 | 0.358 | 0.206 | 0.145 | 0.096 | 0.956 |
| 2000 |    | 44.35 | 44.02 | 28.82 | 1.20 | 5.58 | 104.03 | 0.359 | 0.202 | 0.144 | 0.083 | 0.884 |
| 0    | 38 | 39.77 | 39.39 | 21.95 | 1.52 | 7.55 | 99.17  | 0.509 | 0.305 | 0.180 | 0.087 | 0.329 |
| 250  |    | 39.76 | 39.39 | 22.46 | 1.49 | 7.26 | 99.07  | 0.498 | 0.294 | 0.176 | 0.059 | 0.258 |
| 500  |    | 39.71 | 39.34 | 22.24 | 1.49 | 7.31 | 98.77  | 0.497 | 0.296 | 0.177 | 0.059 | 0.226 |
| 1000 |    | 39.67 | 39.30 | 22.39 | 1.46 | 7.21 | 98.45  | 0.488 | 0.292 | 0.175 | 0.076 | 0.246 |
| 2000 |    | 39.64 | 39.27 | 22.52 | 1.47 | 7.13 | 98.36  | 0.492 | 0.289 | 0.174 | 0.061 | 0.184 |
| 0    | 39 | 43.57 | 43.25 | 27.22 | 1.23 | 5.86 | 97.84  | 0.374 | 0.216 | 0.143 | 0.079 | 0.254 |
| 250  |    | 43.56 | 43.24 | 27.98 | 1.21 | 5.64 | 98.23  | 0.369 | 0.208 | 0.140 | 0.055 | 0.188 |
| 500  |    | 43.51 | 43.20 | 27.63 | 1.20 | 5.66 | 96.94  | 0.367 | 0.209 | 0.140 | 0.058 | 0.169 |
| 1000 |    | 43.48 | 43.17 | 27.87 | 1.17 | 5.57 | 96.18  | 0.358 | 0.205 | 0.137 | 0.067 | 0.186 |
| 2000 |    | 43.46 | 43.14 | 28.06 | 1.18 | 5.48 | 95.58  | 0.360 | 0.202 | 0.136 | 0.059 | 0.140 |
| 0    | 40 | 43.84 | 43.51 | 28.14 | 1.27 | 6.04 | 111.07 | 0.385 | 0.221 | 0.157 | 0.144 | 1.937 |
| 250  |    | 43.82 | 43.50 | 28.95 | 1.26 | 5.80 | 111.82 | 0.380 | 0.212 | 0.154 | 0.099 | 1.392 |
| 500  |    | 43.77 | 43.45 | 28.69 | 1.24 | 5.82 | 111.61 | 0.377 | 0.213 | 0.155 | 0.090 | 1.313 |
| 1000 |    | 43.73 | 43.42 | 28.89 | 1.21 | 5.73 | 111.24 | 0.367 | 0.210 | 0.153 | 0.107 | 1.465 |
| 2000 |    | 43.71 | 43.39 | 29.16 | 1.22 | 5.65 | 111.99 | 0.369 | 0.207 | 0.153 | 0.112 | 1.650 |
| 0    | 41 | 43.19 | 42.78 | 23.21 | 1.60 | 8.28 | 108.41 | 0.491 | 0.308 | 0.186 | 0.074 | 0.557 |
| 250  |    | 43.18 | 42.78 | 23.72 | 1.57 | 8.03 | 109.21 | 0.483 | 0.299 | 0.183 | 0.059 | 0.472 |
| 500  |    | 43.13 | 42.72 | 23.59 | 1.58 | 8.13 | 110.02 | 0.485 | 0.303 | 0.186 | 0.060 | 0.448 |
| 1000 |    | 43.10 | 42.70 | 23.73 | 1.53 | 7.98 | 109.30 | 0.472 | 0.297 | 0.183 | 0.089 | 0.580 |
| 2000 |    | 43.07 | 42.67 | 23.98 | 1.55 | 7.85 | 109.71 | 0.476 | 0.293 | 0.182 | 0.066 | 0.472 |
| 0    | 42 | 43.29 | 42.90 | 27.85 | 1.35 | 5.84 | 105.00 | 0.413 | 0.217 | 0.150 | 0.078 | 0.449 |
| 250  |    | 43.27 | 42.89 | 28.62 | 1.33 | 5.61 | 105.24 | 0.408 | 0.208 | 0.146 | 0.064 | 0.312 |
| 500  |    | 43.21 | 42.83 | 28.47 | 1.31 | 5.61 | 105.28 | 0.404 | 0.209 | 0.147 | 0.064 | 0.277 |
| 1000 |    | 43.17 | 42.80 | 28.73 | 1.28 | 5.51 | 104.91 | 0.393 | 0.205 | 0.145 | 0.073 | 0.288 |
| 2000 |    | 43.14 | 42.77 | 29.12 | 1.29 | 5.42 | 105.65 | 0.397 | 0.202 | 0.144 | 0.067 | 0.254 |
| 0    | 43 | 43.22 | 42.88 | 26.93 | 1.31 | 6.19 | 108.34 | 0.404 | 0.230 | 0.160 | 0.143 | 1.625 |
| 250  |    | 43.21 | 42.86 | 27.64 | 1.31 | 5.97 | 109.01 | 0.402 | 0.222 | 0.157 | 0.112 | 1.224 |
| 500  |    | 43.15 | 42.81 | 27.41 | 1.30 | 6.00 | 109.15 | 0.400 | 0.223 | 0.158 | 0.107 | 1.121 |
| 1000 |    | 43.12 | 42.78 | 27.71 | 1.27 | 5.90 | 109.00 | 0.391 | 0.219 | 0.157 | 0.119 | 1.175 |
| 2000 |    | 43.09 | 42.75 | 27.99 | 1.28 | 5.80 | 109.46 | 0.394 | 0.216 | 0.156 | 0.122 | 1.186 |



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|      |    |       |       |       |      |      |        |       |       |       |       |       |
|------|----|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 44 | 43.26 | 42.90 | 28.30 | 1.27 | 5.50 | 101.50 | 0.309 | 0.207 | 0.143 | 0.104 | 0.590 |
| 250  |    | 43.25 | 42.90 | 29.20 | 1.25 | 5.34 | 102.17 | 0.303 | 0.198 | 0.139 | 0.066 | 0.456 |
| 500  |    | 43.19 | 42.85 | 28.98 | 1.23 | 5.34 | 102.00 | 0.378 | 0.198 | 0.140 | 0.053 | 0.410 |
| 1000 |    | 43.16 | 42.82 | 29.20 | 1.19 | 5.22 | 101.45 | 0.367 | 0.194 | 0.138 | 0.065 | 0.427 |
| 2000 |    | 43.14 | 42.80 | 29.57 | 1.20 | 5.12 | 101.56 | 0.369 | 0.191 | 0.137 | 0.064 | 0.422 |
| 0    | 45 | 43.66 | 43.35 | 26.78 | 1.23 | 6.10 | 101.02 | 0.375 | 0.224 | 0.150 | 0.070 | 0.267 |
| 250  |    | 43.64 | 43.33 | 27.48 | 1.22 | 5.89 | 101.66 | 0.371 | 0.216 | 0.147 | 0.051 | 0.203 |
| 500  |    | 43.50 | 43.28 | 27.26 | 1.22 | 5.93 | 101.82 | 0.370 | 0.218 | 0.149 | 0.051 | 0.185 |
| 1000 |    | 43.55 | 43.25 | 27.53 | 1.18 | 5.80 | 101.14 | 0.361 | 0.214 | 0.146 | 0.061 | 0.201 |
| 2000 |    | 43.52 | 43.22 | 27.80 | 1.19 | 5.69 | 100.90 | 0.362 | 0.210 | 0.144 | 0.053 | 0.162 |
| 0    | 46 | 42.36 | 42.09 | 26.03 | 1.24 | 6.28 | 110.74 | 0.388 | 0.237 | 0.169 | 0.086 | 0.247 |
| 250  |    | 42.35 | 42.06 | 26.73 | 1.22 | 6.04 | 111.27 | 0.382 | 0.228 | 0.166 | 0.053 | 0.174 |
| 500  |    | 42.29 | 42.02 | 26.42 | 1.21 | 6.09 | 111.27 | 0.381 | 0.231 | 0.168 | 0.050 | 0.145 |
| 1000 |    | 42.25 | 41.98 | 26.64 | 1.19 | 5.99 | 111.03 | 0.372 | 0.227 | 0.166 | 0.053 | 0.147 |
| 2000 |    | 42.23 | 41.95 | 26.88 | 1.19 | 5.92 | 111.84 | 0.375 | 0.225 | 0.166 | 0.048 | 0.106 |
| 0    | 47 | 44.04 | 43.68 | 23.39 | 1.30 | 5.84 | 105.99 | 0.391 | 0.213 | 0.149 | 0.101 | 1.429 |
| 250  |    | 44.03 | 43.67 | 29.15 | 1.28 | 5.63 | 106.75 | 0.386 | 0.205 | 0.146 | 0.073 | 0.926 |
| 500  |    | 43.97 | 43.62 | 28.81 | 1.27 | 5.66 | 106.43 | 0.384 | 0.206 | 0.147 | 0.072 | 0.878 |
| 1000 |    | 43.94 | 43.59 | 29.16 | 1.24 | 5.55 | 106.23 | 0.375 | 0.203 | 0.145 | 0.086 | 0.908 |
| 2000 |    | 43.91 | 43.56 | 29.47 | 1.25 | 5.44 | 106.36 | 0.377 | 0.199 | 0.144 | 0.084 | 1.060 |
| 0    | 48 | 43.13 | 42.82 | 25.36 | 1.29 | 6.68 | 102.71 | 0.397 | 0.248 | 0.161 | 0.077 | 0.291 |
| 250  |    | 43.11 | 42.81 | 26.02 | 1.27 | 6.43 | 103.03 | 0.390 | 0.239 | 0.158 | 0.051 | 0.226 |
| 500  |    | 43.06 | 42.76 | 25.73 | 1.26 | 6.48 | 102.68 | 0.388 | 0.241 | 0.159 | 0.052 | 0.200 |
| 1000 |    | 43.03 | 42.73 | 26.04 | 1.23 | 6.36 | 102.49 | 0.379 | 0.237 | 0.157 | 0.061 | 0.212 |
| 2000 |    | 43.00 | 42.70 | 26.39 | 1.24 | 6.25 | 102.94 | 0.381 | 0.233 | 0.155 | 0.052 | 0.164 |
| 0    | 49 | 45.21 | 44.84 | 27.18 | 1.36 | 6.59 | 104.52 | 0.399 | 0.234 | 0.153 | 0.116 | 7.340 |
| 250  |    | 45.20 | 44.83 | 27.82 | 1.34 | 6.34 | 104.88 | 0.392 | 0.225 | 0.150 | 0.075 | 4.650 |
| 500  |    | 45.15 | 44.77 | 27.52 | 1.36 | 6.39 | 104.08 | 0.400 | 0.227 | 0.150 | 0.263 | 5.230 |
| 1000 |    | 45.10 | 44.73 | 27.79 | 1.32 | 6.30 | 103.62 | 0.390 | 0.224 | 0.149 | 0.296 | 5.410 |
| 2000 |    | 45.12 | 44.73 | 28.24 | 1.35 | 6.14 | 104.10 | 0.396 | 0.218 | 0.147 | 0.296 | 5.440 |
| 0    | 50 | 45.33 | 45.02 | 26.42 | 1.33 | 7.14 | 110.95 | 0.389 | 0.252 | 0.167 | 0.121 | 1.008 |
| 250  |    | 45.32 | 45.01 | 27.13 | 1.32 | 6.87 | 111.82 | 0.385 | 0.243 | 0.164 | 0.071 | 0.874 |
| 500  |    | 45.27 | 44.95 | 26.96 | 1.32 | 6.89 | 111.42 | 0.387 | 0.244 | 0.164 | 0.075 | 0.765 |
| 1000 |    | 45.22 | 44.91 | 27.16 | 1.28 | 6.79 | 111.23 | 0.375 | 0.241 | 0.163 | 0.075 | 0.676 |
| 2000 |    | 45.23 | 44.91 | 27.66 | 1.29 | 6.63 | 112.06 | 0.379 | 0.235 | 0.161 | 0.076 | 0.686 |
| 0    | 51 | 44.45 | 44.04 | 25.32 | 1.51 | 7.50 | 106.85 | 0.451 | 0.271 | 0.168 | 0.108 | 0.397 |
| 250  |    | 44.43 | 44.03 | 25.84 | 1.49 | 7.22 | 105.86 | 0.445 | 0.261 | 0.163 | 0.061 | 0.391 |
| 500  |    | 44.30 | 43.97 | 25.83 | 1.49 | 7.27 | 106.77 | 0.445 | 0.263 | 0.164 | 0.070 | 0.331 |
| 1000 |    | 44.33 | 43.93 | 26.12 | 1.45 | 7.14 | 106.74 | 0.433 | 0.259 | 0.163 | 0.072 | 0.351 |
| 2000 |    | 44.34 | 43.93 | 26.56 | 1.46 | 6.96 | 106.65 | 0.437 | 0.252 | 0.160 | 0.072 | 0.304 |
| 0    | 52 | 43.28 | 42.95 | 26.13 | 1.31 | 6.41 | 101.44 | 0.401 | 0.238 | 0.154 | 0.111 | 0.430 |
| 250  |    | 43.27 | 42.95 | 26.75 | 1.29 | 6.18 | 101.52 | 0.394 | 0.229 | 0.151 | 0.060 | 0.383 |
| 500  |    | 43.20 | 42.88 | 26.58 | 1.28 | 6.21 | 101.24 | 0.394 | 0.231 | 0.152 | 0.068 | 0.311 |
| 1000 |    | 43.16 | 42.84 | 26.74 | 1.25 | 6.10 | 100.24 | 0.383 | 0.227 | 0.149 | 0.070 | 0.310 |
| 2000 |    | 43.17 | 42.83 | 27.26 | 1.27 | 5.98 | 100.99 | 0.390 | 0.222 | 0.147 | 0.068 | 0.276 |

|    |      |       |       |       |      |      |        |       |       |       |       |       |
|----|------|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 53 | 0    | 43.86 | 43.83 | 26.56 | 1.27 | 6.22 | 100.67 | 0.371 | 0.226 | 0.152 | 0.070 | 0.207 |
|    | 250  | 43.81 | 43.52 | 27.18 | 1.27 | 5.99 | 101.78 | 0.364 | 0.219 | 0.149 | 0.046 | 0.238 |
|    | 500  | 43.76 | 43.47 | 26.86 | 1.20 | 6.04 | 101.63 | 0.363 | 0.221 | 0.151 | 0.058 | 0.205 |
|    | 1000 | 43.73 | 43.44 | 27.11 | 1.16 | 5.92 | 101.17 | 0.353 | 0.217 | 0.148 | 0.070 | 0.216 |
|    | 2000 | 43.74 | 43.44 | 27.52 | 1.17 | 5.74 | 100.80 | 0.356 | 0.210 | 0.146 | 0.060 | 0.178 |
| 54 | 0    | 43.86 | 42.69 | 26.45 | 1.37 | 6.18 | 103.78 | 0.421 | 0.230 | 0.156 | 0.144 | 1.365 |
|    | 250  | 43.86 | 42.67 | 27.24 | 1.35 | 5.90 | 104.06 | 0.415 | 0.220 | 0.152 | 0.080 | 1.077 |
|    | 500  | 42.98 | 42.61 | 27.03 | 1.34 | 5.92 | 103.69 | 0.413 | 0.221 | 0.153 | 0.082 | 0.941 |
|    | 1000 | 42.92 | 42.58 | 27.37 | 1.30 | 5.81 | 103.77 | 0.401 | 0.217 | 0.151 | 0.083 | 0.855 |
|    | 2000 | 42.94 | 42.57 | 27.74 | 1.31 | 5.68 | 103.48 | 0.405 | 0.212 | 0.148 | 0.086 | 0.902 |
| 55 | 0    | 45.11 | 44.76 | 28.35 | 1.29 | 5.98 | 104.96 | 0.379 | 0.213 | 0.147 | 0.093 | 0.227 |
|    | 250  | 45.08 | 44.76 | 29.01 | 1.27 | 5.77 | 104.99 | 0.374 | 0.205 | 0.144 | 0.051 | 3.273 |
|    | 500  | 45.04 | 44.69 | 28.91 | 1.26 | 5.77 | 105.89 | 0.370 | 0.205 | 0.146 | 0.060 | 0.226 |
|    | 1000 | 45.00 | 44.66 | 29.23 | 1.21 | 5.63 | 105.58 | 0.358 | 0.201 | 0.144 | 0.064 | 0.241 |
|    | 2000 | 45.01 | 44.66 | 29.77 | 1.23 | 5.48 | 106.22 | 0.363 | 0.195 | 0.142 | 0.061 | 0.186 |
| 56 | 0    | 44.83 | 44.56 | 27.72 | 1.18 | 6.25 | 108.91 | 0.350 | 0.223 | 0.156 | 0.201 | 2.650 |
|    | 250  | 44.81 | 44.54 | 28.25 | 1.16 | 5.96 | 108.63 | 0.344 | 0.213 | 0.153 | 0.189 | 2.730 |
|    | 500  | 44.80 | 44.53 | 28.04 | 1.17 | 6.09 | 109.12 | 0.347 | 0.218 | 0.155 | 0.190 | 2.510 |
|    | 1000 | 44.77 | 44.50 | 28.34 | 1.14 | 5.97 | 109.12 | 0.337 | 0.214 | 0.153 | 0.212 | 2.700 |
|    | 2000 | 44.78 | 44.50 | 28.73 | 1.14 | 5.81 | 109.08 | 0.338 | 0.208 | 0.151 | 0.218 | 2.500 |
| 57 | 0    | 42.92 | 42.60 | 27.34 | 1.26 | 6.03 | 109.49 | 0.389 | 0.225 | 0.159 | 0.074 | 0.241 |
|    | 250  | 42.91 | 42.60 | 28.06 | 1.25 | 5.78 | 110.02 | 0.385 | 0.216 | 0.156 | 0.053 | 0.254 |
|    | 500  | 42.85 | 42.54 | 27.86 | 1.22 | 5.79 | 109.36 | 0.378 | 0.217 | 0.156 | 0.061 | 0.204 |
|    | 1000 | 42.81 | 42.52 | 28.21 | 1.18 | 5.66 | 108.72 | 0.365 | 0.212 | 0.153 | 0.064 | 0.212 |
|    | 2000 | 42.81 | 42.51 | 28.65 | 1.19 | 5.52 | 108.91 | 0.369 | 0.207 | 0.151 | 0.061 | 0.166 |
| 58 | 0    | 44.59 | 44.25 | 28.94 | 1.24 | 5.70 | 104.77 | 0.369 | 0.205 | 0.144 | 0.103 | 0.261 |
|    | 250  | 44.58 | 44.23 | 29.58 | 1.22 | 5.50 | 104.08 | 0.364 | 0.198 | 0.140 | 0.055 | 0.315 |
|    | 500  | 44.51 | 44.19 | 29.56 | 1.20 | 5.47 | 105.59 | 0.357 | 0.197 | 0.142 | 0.061 | 0.242 |
|    | 1000 | 44.47 | 44.16 | 29.89 | 1.16 | 5.35 | 105.36 | 0.345 | 0.193 | 0.140 | 0.061 | 0.259 |
|    | 2000 | 44.47 | 44.15 | 30.22 | 1.17 | 5.22 | 105.03 | 0.349 | 0.188 | 0.138 | 0.060 | 0.194 |
| 59 | 0    | 43.13 | 42.80 | 26.92 | 1.30 | 6.09 | 105.67 | 0.401 | 0.227 | 0.156 | 0.092 | 0.227 |
|    | 250  | 43.11 | 42.80 | 27.63 | 1.29 | 5.81 | 106.25 | 0.396 | 0.216 | 0.153 | 0.051 | 0.264 |
|    | 500  | 43.06 | 42.73 | 27.43 | 1.27 | 5.87 | 105.75 | 0.390 | 0.219 | 0.153 | 0.060 | 0.213 |
|    | 1000 | 43.03 | 42.70 | 27.66 | 1.23 | 5.76 | 105.04 | 0.379 | 0.215 | 0.151 | 0.061 | 0.229 |
|    | 2000 | 43.02 | 42.69 | 28.07 | 1.24 | 5.66 | 105.80 | 0.383 | 0.211 | 0.150 | 0.059 | 0.172 |
| 60 | 0    | 42.77 | 42.38 | 23.54 | 1.58 | 8.23 | 111.24 | 0.491 | 0.309 | 0.188 | 0.094 | 0.239 |
|    | 250  | 42.78 | 42.38 | 24.31 | 1.56 | 7.96 | 113.03 | 0.483 | 0.299 | 0.185 | 0.053 | 0.268 |
|    | 500  | 42.70 | 42.30 | 23.90 | 1.56 | 8.04 | 111.29 | 0.485 | 0.303 | 0.185 | 0.061 | 0.218 |
|    | 1000 | 42.66 | 42.26 | 24.15 | 1.52 | 7.91 | 111.13 | 0.474 | 0.298 | 0.183 | 0.065 | 0.237 |
|    | 2000 | 42.65 | 42.24 | 24.50 | 1.54 | 7.80 | 111.82 | 0.478 | 0.294 | 0.182 | 0.061 | 0.188 |
| 61 | 0    | 43.54 | 43.25 | 25.74 | 1.24 | 6.57 | 101.56 | 0.377 | 0.242 | 0.157 | 0.085 | 0.323 |
|    | 250  | 43.53 | 43.24 | 26.19 | 1.22 | 6.33 | 100.71 | 0.372 | 0.233 | 0.153 | 0.047 | 0.310 |
|    | 500  | 43.47 | 43.17 | 26.29 | 1.21 | 6.32 | 101.38 | 0.369 | 0.233 | 0.153 | 0.056 | 0.254 |
|    | 1000 | 43.43 | 43.16 | 26.60 | 1.17 | 6.16 | 100.52 | 0.359 | 0.227 | 0.150 | 0.060 | 0.264 |
|    | 2000 | 43.42 | 43.14 | 27.02 | 1.18 | 6.03 | 100.83 | 0.361 | 0.222 | 0.148 | 0.057 | 0.214 |

|    |      |       |       |       |      |      |        |       |       |       |       |       |
|----|------|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 62 | 0    | 43.32 | 42.95 | 26.02 | 1.37 | 8.52 | 102.65 | 0.424 | 0.242 | 0.157 | 0.129 | 1.219 |
|    | 250  | 43.32 | 42.94 | 26.64 | 1.37 | 6.34 | 102.44 | 0.419 | 0.235 | 0.153 | 0.083 | 1.047 |
|    | 500  | 43.25 | 42.87 | 26.40 | 1.38 | 6.33 | 102.04 | 0.423 | 0.235 | 0.154 | 0.086 | 0.969 |
|    | 1000 | 43.21 | 42.83 | 26.67 | 1.35 | 6.21 | 101.44 | 0.413 | 0.231 | 0.151 | 0.089 | 0.897 |
|    | 2000 | 43.19 | 42.80 | 26.99 | 1.36 | 6.12 | 101.63 | 0.419 | 0.227 | 0.150 | 0.089 | 0.858 |
| 63 | 0    | 43.80 | 43.48 | 26.41 | 1.26 | 6.29 | 101.66 | 0.383 | 0.230 | 0.153 | 0.081 | 0.446 |
|    | 250  | 43.80 | 43.47 | 27.04 | 1.25 | 6.06 | 101.94 | 0.379 | 0.222 | 0.150 | 0.052 | 0.421 |
|    | 500  | 43.73 | 43.42 | 26.78 | 1.24 | 6.12 | 102.01 | 0.377 | 0.224 | 0.152 | 0.060 | 0.359 |
|    | 1000 | 43.70 | 43.39 | 27.03 | 1.21 | 5.97 | 101.39 | 0.366 | 0.219 | 0.149 | 0.066 | 0.392 |
|    | 2000 | 43.69 | 43.37 | 27.53 | 1.21 | 5.83 | 101.95 | 0.369 | 0.214 | 0.147 | 0.062 | 0.320 |
| 64 | 0    | 44.29 | 43.86 | 24.94 | 1.55 | 7.60 | 107.50 | 0.464 | 0.276 | 0.172 | 0.092 | 0.861 |
|    | 250  | 44.28 | 43.84 | 25.76 | 1.53 | 7.41 | 107.47 | 0.457 | 0.269 | 0.166 | 0.063 | 0.782 |
|    | 500  | 44.22 | 43.80 | 25.19 | 1.53 | 7.44 | 107.49 | 0.460 | 0.270 | 0.170 | 0.073 | 0.695 |
|    | 1000 | 44.19 | 43.77 | 25.47 | 1.49 | 7.29 | 107.16 | 0.449 | 0.265 | 0.167 | 0.091 | 0.740 |
|    | 2000 | 44.18 | 43.75 | 25.67 | 1.51 | 7.14 | 107.46 | 0.453 | 0.260 | 0.165 | 0.077 | 0.682 |
| 65 | 0    | 43.96 | 43.67 | 25.50 | 1.26 | 6.79 | 103.44 | 0.381 | 0.248 | 0.161 | 0.082 | 0.358 |
|    | 250  | 43.96 | 43.65 | 26.38 | 1.25 | 6.61 | 103.75 | 0.376 | 0.241 | 0.158 | 0.048 | 0.334 |
|    | 500  | 43.89 | 43.60 | 25.94 | 1.24 | 6.58 | 103.93 | 0.374 | 0.240 | 0.159 | 0.053 | 0.282 |
|    | 1000 | 43.85 | 43.57 | 26.26 | 1.21 | 6.42 | 103.59 | 0.365 | 0.235 | 0.157 | 0.082 | 0.403 |
|    | 2000 | 43.84 | 43.55 | 26.73 | 1.21 | 6.28 | 104.36 | 0.367 | 0.229 | 0.155 | 0.075 | 0.342 |
| 66 | 0    | 43.35 | 42.90 | 25.67 | 1.41 | 6.87 | 109.01 | 0.433 | 0.254 | 0.169 | 0.079 | 0.195 |
|    | 250  | 43.33 | 42.98 | 26.37 | 1.40 | 6.70 | 109.35 | 0.428 | 0.243 | 0.165 | 0.046 | 0.245 |
|    | 500  | 43.26 | 42.90 | 25.97 | 1.40 | 6.74 | 109.56 | 0.429 | 0.250 | 0.168 | 0.056 | 0.209 |
|    | 1000 | 43.22 | 42.86 | 26.18 | 1.37 | 6.64 | 109.05 | 0.420 | 0.247 | 0.166 | 0.061 | 0.228 |
|    | 2000 | 43.20 | 42.83 | 26.42 | 1.39 | 6.54 | 108.76 | 0.426 | 0.243 | 0.164 | 0.057 | 0.172 |
| 67 | 0    | 44.52 | 44.23 | 29.25 | 1.14 | 5.50 | 103.94 | 0.341 | 0.198 | 0.141 | 0.093 | 0.320 |
|    | 250  | 44.50 | 44.22 | 30.91 | 1.13 | 5.31 | 107.21 | 0.337 | 0.191 | 0.138 | 0.053 | 0.324 |
|    | 500  | 44.45 | 44.16 | 29.88 | 1.12 | 5.29 | 104.48 | 0.335 | 0.191 | 0.139 | 0.058 | 0.263 |
|    | 1000 | 44.40 | 44.13 | 30.31 | 1.09 | 5.17 | 104.46 | 0.325 | 0.186 | 0.137 | 0.056 | 0.263 |
|    | 2000 | 44.39 | 44.11 | 30.69 | 1.09 | 5.06 | 104.50 | 0.327 | 0.182 | 0.136 | 0.056 | 0.228 |
| 68 | 0    | 44.67 | 44.32 | 29.32 | 1.25 | 5.67 | 105.78 | 0.371 | 0.204 | 0.144 | 0.075 | 0.355 |
|    | 250  | 44.66 | 44.31 | 30.08 | 1.23 | 5.46 | 106.59 | 0.365 | 0.196 | 0.141 | 0.054 | 0.346 |
|    | 500  | 44.60 | 44.26 | 29.71 | 1.22 | 5.51 | 106.02 | 0.364 | 0.198 | 0.142 | 0.063 | 0.299 |
|    | 1000 | 44.56 | 44.23 | 30.09 | 1.19 | 5.39 | 105.89 | 0.354 | 0.194 | 0.140 | 0.065 | 0.311 |
|    | 2000 | 44.55 | 44.22 | 30.48 | 1.20 | 5.28 | 106.14 | 0.357 | 0.190 | 0.139 | 0.064 | 0.274 |
| 69 | 0    | 45.00 | 44.64 | 28.23 | 1.33 | 6.13 | 107.90 | 0.391 | 0.219 | 0.152 | 0.069 | 0.296 |
|    | 250  | 45.00 | 44.62 | 29.80 | 1.31 | 5.89 | 111.59 | 0.387 | 0.210 | 0.149 | 0.047 | 0.316 |
|    | 500  | 44.93 | 44.57 | 28.53 | 1.30 | 5.97 | 108.49 | 0.383 | 0.213 | 0.151 | 0.058 | 0.264 |
|    | 1000 | 44.89 | 44.55 | 28.87 | 1.26 | 5.86 | 108.55 | 0.372 | 0.209 | 0.150 | 0.060 | 0.274 |
|    | 2000 | 44.89 | 44.53 | 29.27 | 1.27 | 5.74 | 109.35 | 0.376 | 0.205 | 0.149 | 0.057 | 0.214 |
| 70 | 0    | 42.75 | 42.41 | 27.53 | 1.30 | 6.00 | 110.50 | 0.405 | 0.225 | 0.160 | 0.085 | 0.445 |
|    | 250  | 42.75 | 42.40 | 28.22 | 1.28 | 5.73 | 109.93 | 0.398 | 0.215 | 0.155 | 0.051 | 0.400 |
|    | 500  | 42.63 | 42.35 | 27.95 | 1.27 | 5.78 | 110.46 | 0.394 | 0.217 | 0.157 | 0.056 | 0.336 |
|    | 1000 | 42.64 | 42.32 | 28.28 | 1.22 | 5.66 | 110.08 | 0.381 | 0.213 | 0.155 | 0.060 | 0.348 |
|    | 2000 | 42.64 | 42.31 | 28.65 | 1.24 | 5.55 | 110.44 | 0.386 | 0.209 | 0.153 | 0.056 | 0.330 |

|      |       |       |       |      |      |        |       |       |       |       |       |
|------|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 43.30 | 42.95 | 26.62 | 1.37 | 6.52 | 102.63 | 0.414 | 0.242 | 0.157 | 0.129 | 1.210 |
| 250  | 43.22 | 42.94 | 26.64 | 1.37 | 6.34 | 102.42 | 0.419 | 0.235 | 0.153 | 0.083 | 1.047 |
| 500  | 43.25 | 42.67 | 26.40 | 1.30 | 6.33 | 102.04 | 0.423 | 0.235 | 0.154 | 0.086 | 0.969 |
| 1000 | 43.21 | 42.83 | 26.67 | 1.35 | 6.21 | 101.44 | 0.413 | 0.231 | 0.151 | 0.089 | 0.897 |
| 2000 | 43.17 | 42.80 | 26.99 | 1.36 | 6.12 | 101.63 | 0.419 | 0.227 | 0.150 | 0.089 | 0.858 |
| 0    | 43.80 | 43.48 | 26.41 | 1.26 | 6.29 | 101.66 | 0.383 | 0.230 | 0.153 | 0.081 | 0.446 |
| 250  | 43.80 | 43.47 | 27.04 | 1.25 | 6.06 | 101.94 | 0.379 | 0.222 | 0.150 | 0.052 | 0.421 |
| 500  | 43.73 | 43.42 | 26.78 | 1.24 | 6.12 | 102.01 | 0.377 | 0.224 | 0.152 | 0.060 | 0.359 |
| 1000 | 43.70 | 43.39 | 27.08 | 1.21 | 5.97 | 101.39 | 0.366 | 0.219 | 0.149 | 0.066 | 0.392 |
| 2000 | 43.69 | 43.37 | 27.53 | 1.21 | 5.83 | 101.95 | 0.369 | 0.214 | 0.147 | 0.062 | 0.320 |
| 0    | 44.29 | 43.86 | 24.94 | 1.55 | 7.60 | 107.50 | 0.464 | 0.276 | 0.172 | 0.092 | 0.861 |
| 250  | 44.28 | 43.84 | 25.76 | 1.53 | 7.41 | 107.47 | 0.457 | 0.269 | 0.166 | 0.063 | 0.782 |
| 500  | 44.22 | 43.80 | 25.19 | 1.53 | 7.44 | 107.49 | 0.460 | 0.270 | 0.170 | 0.073 | 0.695 |
| 1000 | 44.19 | 43.77 | 25.47 | 1.49 | 7.29 | 107.16 | 0.449 | 0.265 | 0.167 | 0.091 | 0.740 |
| 2000 | 44.18 | 43.75 | 25.87 | 1.51 | 7.14 | 107.46 | 0.453 | 0.260 | 0.165 | 0.077 | 0.682 |
| 0    | 43.96 | 43.67 | 25.50 | 1.26 | 6.79 | 103.44 | 0.381 | 0.248 | 0.161 | 0.082 | 0.358 |
| 250  | 43.96 | 43.65 | 26.38 | 1.25 | 6.61 | 104.75 | 0.376 | 0.241 | 0.158 | 0.048 | 0.334 |
| 500  | 43.89 | 43.60 | 25.94 | 1.24 | 6.58 | 103.93 | 0.374 | 0.240 | 0.159 | 0.053 | 0.282 |
| 1000 | 43.85 | 43.57 | 26.26 | 1.21 | 6.42 | 103.59 | 0.365 | 0.235 | 0.157 | 0.082 | 0.403 |
| 2000 | 43.84 | 43.55 | 26.73 | 1.21 | 6.28 | 104.36 | 0.367 | 0.229 | 0.155 | 0.075 | 0.342 |
| 0    | 43.35 | 42.98 | 25.67 | 1.41 | 6.87 | 109.01 | 0.433 | 0.254 | 0.169 | 0.079 | 0.195 |
| 250  | 43.33 | 42.98 | 26.37 | 1.40 | 6.70 | 109.35 | 0.428 | 0.248 | 0.165 | 0.046 | 0.245 |
| 500  | 43.26 | 42.90 | 25.97 | 1.40 | 6.74 | 109.56 | 0.429 | 0.250 | 0.168 | 0.056 | 0.209 |
| 1000 | 43.22 | 42.86 | 26.18 | 1.37 | 6.64 | 109.05 | 0.420 | 0.247 | 0.166 | 0.061 | 0.228 |
| 2000 | 43.20 | 42.83 | 26.42 | 1.39 | 6.54 | 108.76 | 0.426 | 0.243 | 0.164 | 0.057 | 0.172 |
| 0    | 44.52 | 44.23 | 29.25 | 1.14 | 5.50 | 103.94 | 0.341 | 0.198 | 0.141 | 0.093 | 0.320 |
| 250  | 44.50 | 44.22 | 30.91 | 1.13 | 5.31 | 107.21 | 0.337 | 0.191 | 0.138 | 0.053 | 0.324 |
| 500  | 44.45 | 44.16 | 29.88 | 1.12 | 5.29 | 104.48 | 0.335 | 0.191 | 0.139 | 0.058 | 0.263 |
| 1000 | 44.40 | 44.13 | 30.31 | 1.09 | 5.17 | 104.46 | 0.325 | 0.186 | 0.137 | 0.056 | 0.263 |
| 2000 | 44.37 | 44.11 | 30.69 | 1.09 | 5.06 | 104.50 | 0.327 | 0.182 | 0.136 | 0.056 | 0.228 |
| 0    | 44.67 | 44.32 | 29.32 | 1.25 | 5.67 | 105.78 | 0.371 | 0.204 | 0.144 | 0.075 | 0.355 |
| 250  | 44.66 | 44.31 | 30.08 | 1.23 | 5.46 | 106.59 | 0.365 | 0.196 | 0.141 | 0.054 | 0.346 |
| 500  | 44.60 | 44.26 | 29.71 | 1.22 | 5.51 | 106.02 | 0.364 | 0.198 | 0.142 | 0.063 | 0.299 |
| 1000 | 44.56 | 44.23 | 30.09 | 1.19 | 5.39 | 105.89 | 0.354 | 0.194 | 0.140 | 0.065 | 0.311 |
| 2000 | 44.55 | 44.22 | 30.48 | 1.20 | 5.28 | 106.14 | 0.357 | 0.190 | 0.139 | 0.064 | 0.274 |
| 0    | 45.00 | 44.64 | 28.23 | 1.33 | 6.13 | 107.90 | 0.391 | 0.219 | 0.152 | 0.069 | 0.296 |
| 250  | 45.00 | 44.62 | 29.80 | 1.31 | 5.89 | 111.59 | 0.387 | 0.210 | 0.149 | 0.047 | 0.316 |
| 500  | 44.93 | 44.57 | 28.53 | 1.30 | 5.97 | 108.49 | 0.383 | 0.213 | 0.151 | 0.058 | 0.264 |
| 1000 | 44.89 | 44.55 | 28.87 | 1.26 | 5.86 | 108.55 | 0.372 | 0.209 | 0.150 | 0.060 | 0.274 |
| 2000 | 44.89 | 44.53 | 29.27 | 1.27 | 5.74 | 109.35 | 0.376 | 0.205 | 0.149 | 0.057 | 0.214 |
| 0    | 42.75 | 42.41 | 27.53 | 1.30 | 6.00 | 110.50 | 0.405 | 0.225 | 0.160 | 0.085 | 0.445 |
| 250  | 42.75 | 42.40 | 28.22 | 1.28 | 5.73 | 109.93 | 0.398 | 0.215 | 0.155 | 0.051 | 0.400 |
| 500  | 42.68 | 42.35 | 27.95 | 1.27 | 5.78 | 110.46 | 0.394 | 0.217 | 0.157 | 0.056 | 0.336 |
| 1000 | 42.64 | 42.32 | 28.28 | 1.22 | 5.66 | 110.08 | 0.381 | 0.213 | 0.155 | 0.060 | 0.348 |
| 2000 | 42.64 | 42.31 | 28.65 | 1.24 | 5.55 | 110.44 | 0.386 | 0.209 | 0.153 | 0.058 | 0.330 |

|      |    |       |       |       |      |      |        |       |       |       |       |       |
|------|----|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 71 | 44.76 | 43.90 | 27.33 | 1.34 | 5.10 | 100.10 | 0.400 | 0.271 | 0.146 | 0.031 | 0.306 |
| 250  |    | 44.34 | 43.95 | 28.03 | 1.32 | 5.85 | 100.74 | 0.395 | 0.212 | 0.143 | 0.037 | 0.358 |
| 500  |    | 44.20 | 43.90 | 27.62 | 1.32 | 5.95 | 99.64  | 0.396 | 0.216 | 0.144 | 0.068 | 0.315 |
| 1000 |    | 44.24 | 43.87 | 27.89 | 1.29 | 5.84 | 98.92  | 0.386 | 0.212 | 0.141 | 0.081 | 0.341 |
| 2000 |    | 44.23 | 43.85 | 28.23 | 1.30 | 5.73 | 98.79  | 0.390 | 0.208 | 0.139 | 0.082 | 0.340 |
| 0    | 72 | 42.54 | 42.24 | 25.65 | 1.26 | 6.57 | 107.81 | 0.396 | 0.248 | 0.167 | 0.064 | 0.154 |
| 250  |    | 42.53 | 42.22 | 26.27 | 1.26 | 6.39 | 106.30 | 0.394 | 0.241 | 0.161 | 0.041 | 0.197 |
| 500  |    | 42.47 | 42.18 | 25.96 | 1.26 | 6.41 | 107.58 | 0.393 | 0.242 | 0.165 | 0.048 | 0.160 |
| 1000 |    | 42.43 | 42.14 | 26.15 | 1.23 | 6.29 | 106.71 | 0.384 | 0.238 | 0.162 | 0.060 | 0.177 |
| 2000 |    | 42.42 | 42.12 | 26.59 | 1.24 | 6.17 | 107.26 | 0.388 | 0.233 | 0.161 | 0.048 | 0.134 |

ORIGINAL PAGE IS  
OF POOR QUALITY.

\*\*\* SPRAGUE ELECTRIC SURGE CURRENT TEST PROGRAM \*\*\*

--- SURGE CURRENT SCREENED UNITS ---

11/24/79

(N11D LIFE TEST -- 125C, 230V0115

| UNIT  |     | ---CAPACITANCE (uf)--- |       |       |       | ---DISSIPATION FACTOR (Z)--- |        |       |       | ---ESR (OHMS)--- |       |       |       | ---DCI (uA)--- |       | ---FUSE--- |   |
|-------|-----|------------------------|-------|-------|-------|------------------------------|--------|-------|-------|------------------|-------|-------|-------|----------------|-------|------------|---|
| HOURS | NO. | 120Hz                  | 1KHz  | 40KHz | 120Hz | 1KHz                         | 40KHz  | 120Hz | 1KHz  | 40KHz            | 120Hz | 1KHz  | 40KHz | 25C            | 85C   | BLOW       |   |
| 0     | 1   | 44.21                  | 43.92 | 27.19 | 1.20  | 6.18                         | 107.70 | 0.360 | 0.234 | 0.158            | 0.111 | 0.283 | 0.111 | 0.074          | 0.227 |            |   |
| 250   |     | 44.05                  | 43.77 | 29.73 | 1.15  | 5.67                         | 119.36 | 0.346 | 0.206 | 0.160            | 0.074 | 0.227 | 0.074 | 0.074          | 0.227 |            |   |
| 500   |     | 43.97                  | 43.69 | 29.90 | 1.16  | 5.82                         | 124.98 | 0.351 | 0.212 | 0.166            | 0.083 | 0.233 | 0.083 | 0.083          | 0.233 |            |   |
| 1000  |     | 44.02                  | 43.71 | 30.57 | 1.18  | 5.69                         | 125.86 | 0.357 | 0.207 | 0.164            | 0.079 | 0.186 | 0.079 | 0.079          | 0.186 |            |   |
| 2000  |     | 43.96                  | 43.64 | 30.62 | 1.21  | 5.82                         | 129.42 | 0.366 | 0.212 | 0.168            | 0.070 | 0.206 | 0.070 | 0.070          | 0.206 |            |   |
| 0     | 2   | 43.82                  | 43.47 | 25.94 | 1.35  | 6.80                         | 102.42 | 0.409 | 0.239 | 0.157            | 0.136 | 0.280 | 0.136 | 0.085          | 0.239 |            |   |
| 250   |     | 43.63                  | 43.27 | 27.98 | 1.30  | 6.33                         | 109.52 | 0.397 | 0.233 | 0.156            | 0.085 | 0.239 | 0.085 | 0.085          | 0.239 |            |   |
| 500   |     | 43.53                  | 43.16 | 28.18 | 1.33  | 6.51                         | 113.94 | 0.405 | 0.240 | 0.161            | 0.107 | 0.260 | 0.107 | 0.107          | 0.260 |            |   |
| 1000  |     | 43.57                  | 43.17 | 28.79 | 1.36  | 6.41                         | 116.83 | 0.415 | 0.236 | 0.161            | 0.103 | 0.215 | 0.103 | 0.103          | 0.215 |            |   |
| 2000  |     | 43.49                  | 43.08 | 28.81 | 1.41  | 6.60                         | 121.78 | 0.431 | 0.244 | 0.168            | 0.074 | 0.240 | 0.074 | 0.074          | 0.240 |            |   |
| 0     | 3   | 42.80                  | 42.46 | 26.43 | 1.35  | 6.43                         | 111.28 | 0.419 | 0.241 | 0.166            | 0.103 | 0.199 | 0.103 | 0.079          | 0.192 |            |   |
| 250   |     | 42.59                  | 42.22 | 28.25 | 1.33  | 5.95                         | 116.62 | 0.414 | 0.224 | 0.164            | 0.079 | 0.192 | 0.079 | 0.079          | 0.192 |            |   |
| 500   |     | 42.47                  | 42.10 | 28.23 | 1.35  | 6.12                         | 120.74 | 0.423 | 0.232 | 0.170            | 0.092 | 0.217 | 0.092 | 0.092          | 0.217 |            |   |
| 1000  |     | 42.51                  | 42.09 | 28.65 | 1.40  | 5.99                         | 119.59 | 0.437 | 0.227 | 0.166            | 0.084 | 0.187 | 0.084 | 0.084          | 0.187 |            |   |
| 2000  |     | 42.39                  | 41.94 | 28.47 | 1.47  | 6.15                         | 121.44 | 0.459 | 0.233 | 0.170            | 0.076 | 0.247 | 0.076 | 0.076          | 0.247 |            |   |
| 0     | 4   | 43.46                  | 43.16 | 26.52 | 1.26  | 6.44                         | 108.37 | 0.385 | 0.237 | 0.163            | 0.122 | 0.595 | 0.122 | 0.077          | 0.365 |            | * |
| 250   |     | 43.26                  | 42.94 | 28.13 | 1.28  | 6.26                         | 124.13 | 0.392 | 0.232 | 0.176            | 0.077 | 0.365 | 0.077 | 0.077          | 0.365 |            |   |
| 500   |     | 43.44                  | 43.14 | 28.14 | 1.31  | 6.44                         | 108.37 | 0.385 | 0.237 | 0.163            | 0.122 | 0.595 | 0.122 | 0.077          | 0.365 |            |   |
| 1000  |     | 43.44                  | 43.14 | 28.14 | 1.31  | 6.44                         | 108.37 | 0.385 | 0.237 | 0.163            | 0.122 | 0.595 | 0.122 | 0.077          | 0.365 |            |   |
| 2000  |     | 43.44                  | 43.14 | 28.14 | 1.31  | 6.44                         | 108.37 | 0.385 | 0.237 | 0.163            | 0.122 | 0.595 | 0.122 | 0.077          | 0.365 |            |   |
| 0     | 5   | 43.32                  | 43.05 | 27.44 | 1.17  | 5.85                         | 106.35 | 0.358 | 0.216 | 0.154            | 0.127 | 1.032 | 0.127 | 0.089          | 0.523 |            |   |
| 250   |     | 43.09                  | 42.77 | 29.27 | 1.20  | 5.57                         | 115.67 | 0.368 | 0.207 | 0.157            | 0.089 | 0.523 | 0.089 | 0.089          | 0.523 |            |   |
| 500   |     | 42.96                  | 42.63 | 29.13 | 1.24  | 5.81                         | 120.59 | 0.383 | 0.217 | 0.165            | 0.099 | 0.546 | 0.099 | 0.099          | 0.546 |            |   |
| 1000  |     | 42.97                  | 42.61 | 29.55 | 1.28  | 5.74                         | 120.31 | 0.397 | 0.214 | 0.162            | 0.108 | 0.445 | 0.108 | 0.108          | 0.445 |            |   |
| 2000  |     | 42.85                  | 42.47 | 29.22 | 1.35  | 5.94                         | 122.11 | 0.417 | 0.223 | 0.166            | 0.085 | 0.534 | 0.085 | 0.085          | 0.534 |            |   |
| 0     | 6   | 45.39                  | 45.09 | 29.64 | 1.19  | 5.73                         | 109.89 | 0.347 | 0.202 | 0.148            | 0.066 | 0.152 | 0.066 | 0.066          | 0.152 |            |   |
| 250   |     | 45.21                  | 44.88 | 32.41 | 1.20  | 5.47                         | 126.38 | 0.353 | 0.194 | 0.155            | 0.074 | 0.242 | 0.074 | 0.074          | 0.242 |            |   |
| 500   |     | 45.01                  | 44.64 | 32.26 | 1.10  | 5.79                         | 134.50 | 0.382 | 0.207 | 0.166            | 0.109 | 0.281 | 0.109 | 0.109          | 0.281 |            |   |
| 1000  |     | 44.95                  | 44.52 | 32.67 | 1.39  | 5.82                         | 136.79 | 0.409 | 0.208 | 0.167            | 0.108 | 0.189 | 0.108 | 0.108          | 0.189 |            |   |
| 2000  |     | 44.73                  | 44.26 | 32.28 | 1.49  | 6.17                         | 143.52 | 0.443 | 0.222 | 0.177            | 0.186 | 0.349 | 0.186 | 0.186          | 0.349 |            |   |
| 0     | 7   | 42.86                  | 42.55 | 24.35 | 1.34  | 7.18                         | 104.92 | 0.414 | 0.268 | 0.171            | 0.103 | 0.248 | 0.103 | 0.073          | 0.263 |            |   |
| 250   |     | 42.66                  | 42.34 | 26.29 | 1.29  | 6.46                         | 109.17 | 0.401 | 0.243 | 0.165            | 0.073 | 0.263 | 0.073 | 0.073          | 0.263 |            |   |
| 500   |     | 42.57                  | 42.24 | 26.37 | 1.31  | 6.63                         | 112.55 | 0.407 | 0.250 | 0.170            | 0.083 | 0.227 | 0.083 | 0.083          | 0.227 |            |   |
| 1000  |     | 42.61                  | 42.25 | 26.93 | 1.32  | 6.44                         | 111.94 | 0.412 | 0.242 | 0.165            | 0.083 | 0.164 | 0.083 | 0.083          | 0.164 |            |   |
| 2000  |     | 42.55                  | 42.18 | 26.87 | 1.35  | 6.55                         | 113.06 | 0.420 | 0.247 | 0.167            | 0.071 | 0.209 | 0.071 | 0.071          | 0.209 |            |   |

|      |       |       |       |      |      |        |       |       |       |       |       |
|------|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 43.51 | 43.26 | 28.71 | 1.27 | 6.31 | 110.17 | 0.423 | 0.227 | 0.158 | 0.177 | 4.280 |
| 250  | 43.32 | 43.04 | 28.71 | 1.27 | 6.31 | 110.17 | 0.423 | 0.227 | 0.158 | 0.177 | 4.280 |
| 500  | 43.13 | 42.94 | 28.70 | 1.26 | 6.45 | 129.96 | 0.304 | 0.239 | 0.183 | 0.087 | 1.053 |
| 1000 | 43.27 | 42.95 | 28.76 | 1.27 | 6.30 | 129.86 | 0.320 | 0.233 | 0.180 | 0.096 | 1.031 |
| 2000 | 43.19 | 42.85 | 28.67 | 1.33 | 6.47 | 132.67 | 0.407 | 0.240 | 0.184 | 0.098 | 1.371 |
| 0    | 44.45 | 44.23 | 27.81 | 1.42 | 6.31 | 110.17 | 0.423 | 0.227 | 0.158 | 0.177 | 4.280 |
| 250  | 44.44 | 44.23 | 27.81 | 1.42 | 6.31 | 110.17 | 0.423 | 0.227 | 0.158 | 0.177 | 4.280 |
| 500  | 44.44 | 44.23 | 27.81 | 1.42 | 6.31 | 110.17 | 0.423 | 0.227 | 0.158 | 0.177 | 4.280 |
| 1000 | 44.44 | 44.23 | 27.81 | 1.42 | 6.31 | 110.17 | 0.423 | 0.227 | 0.158 | 0.177 | 4.280 |
| 2000 | 44.44 | 44.23 | 27.81 | 1.42 | 6.31 | 110.17 | 0.423 | 0.227 | 0.158 | 0.177 | 4.280 |
| 0    | 43.01 | 42.75 | 26.18 | 1.20 | 6.34 | 109.90 | 0.370 | 0.236 | 0.167 | 0.134 | 1.850 |
| 250  | 42.91 | 42.65 | 26.83 | 1.10 | 5.49 | 114.54 | 0.341 | 0.205 | 0.158 | 0.110 | 1.203 |
| 500  | 42.84 | 42.58 | 29.17 | 1.10 | 5.58 | 119.21 | 0.341 | 0.209 | 0.163 | 0.127 | 1.465 |
| 1000 | 42.89 | 42.61 | 29.87 | 1.11 | 5.42 | 119.34 | 0.344 | 0.202 | 0.159 | 0.143 | 1.419 |
| 2000 | 42.85 | 42.57 | 29.97 | 1.13 | 5.54 | 123.39 | 0.350 | 0.207 | 0.164 | 0.156 | 1.895 |
| 0    | 44.22 | 43.84 | 23.93 | 1.57 | 8.24 | 119.00 | 0.471 | 0.299 | 0.198 | 0.087 | 0.510 |
| 250  | 43.74 | 43.22 | 26.09 | 1.71 | 7.84 | 130.24 | 0.520 | 0.289 | 0.199 | 0.099 | 0.459 |
| 500  | 43.38 | 42.82 | 26.04 | 1.86 | 8.29 | 141.60 | 0.570 | 0.308 | 0.216 | 0.184 | 1.144 |
| 1000 | 43.20 | 42.56 | 26.35 | 1.99 | 8.20 | 144.20 | 0.610 | 0.309 | 0.218 | 0.168 | 0.412 |
| 2000 | 42.82 | 42.12 | 25.75 | 2.16 | 8.77 | 150.53 | 0.669 | 0.332 | 0.233 | 0.124 | 1.107 |
| 0    | 42.03 | 43.44 | 24.89 | 1.51 | 7.64 | 110.75 | 0.456 | 0.280 | 0.177 | 0.091 | 0.203 |
| 250  | 43.60 | 43.17 | 26.80 | 1.40 | 7.07 | 113.81 | 0.450 | 0.261 | 0.169 | 0.068 | 0.206 |
| 500  | 43.40 | 43.04 | 26.73 | 1.52 | 7.32 | 116.96 | 0.463 | 0.271 | 0.174 | 0.081 | 0.223 |
| 1000 | 43.52 | 43.04 | 27.12 | 1.55 | 7.16 | 115.77 | 0.473 | 0.265 | 0.170 | 0.085 | 0.185 |
| 2000 | 43.42 | 42.91 | 27.02 | 1.62 | 7.36 | 117.69 | 0.494 | 0.273 | 0.173 | 0.068 | 0.237 |
| 0    | 42.82 | 42.52 | 24.50 | 1.31 | 7.07 | 104.39 | 0.405 | 0.265 | 0.169 | 0.095 | 0.271 |
| 250  | 42.61 | 42.30 | 26.49 | 1.25 | 6.34 | 107.77 | 0.389 | 0.239 | 0.162 | 0.058 | 0.200 |
| 500  | 42.53 | 42.21 | 26.69 | 1.26 | 6.45 | 110.87 | 0.394 | 0.243 | 0.165 | 0.063 | 0.222 |
| 1000 | 42.57 | 42.23 | 27.22 | 1.27 | 6.22 | 109.53 | 0.395 | 0.234 | 0.160 | 0.067 | 0.175 |
| 2000 | 42.51 | 42.16 | 27.30 | 1.29 | 6.30 | 110.97 | 0.403 | 0.238 | 0.162 | 0.061 | 0.210 |
| 0    | 43.26 | 42.95 | 27.94 | 1.23 | 5.82 | 105.82 | 0.378 | 0.216 | 0.151 | 0.082 | 0.393 |
| 250  | 42.95 | 42.56 | 29.82 | 1.29 | 5.31 | 107.15 | 0.397 | 0.199 | 0.143 | 0.072 | 0.299 |
| 500  | 42.76 | 42.33 | 29.79 | 1.36 | 5.52 | 111.42 | 0.422 | 0.207 | 0.149 | 0.084 | 0.331 |
| 1000 | 42.75 | 42.27 | 30.03 | 1.44 | 5.46 | 110.47 | 0.446 | 0.206 | 0.146 | 0.082 | 0.447 |
| 2000 | 42.75 | 42.27 | 30.03 | 1.44 | 5.46 | 110.47 | 0.446 | 0.206 | 0.146 | 0.082 | 0.447 |
| 0    | 43.30 | 42.96 | 25.48 | 1.35 | 6.85 | 103.27 | 0.415 | 0.254 | 0.161 | 0.167 | 2.450 |
| 250  | 42.96 | 42.53 | 27.39 | 1.43 | 6.48 | 110.11 | 0.443 | 0.243 | 0.160 | 0.139 | 1.851 |
| 500  | 42.78 | 42.32 | 27.41 | 1.50 | 6.71 | 113.99 | 0.465 | 0.252 | 0.165 | 0.157 | 2.500 |
| 1000 | 42.74 | 42.22 | 27.82 | 1.59 | 6.65 | 115.20 | 0.492 | 0.251 | 0.165 | 0.197 | 2.900 |
| 2000 | 42.44 | 41.87 | 27.55 | 1.73 | 7.02 | 121.04 | 0.541 | 0.267 | 0.175 | 0.282 | 4.580 |
| 0    | 42.93 | 42.65 | 23.86 | 1.38 | 7.69 | 119.62 | 0.428 | 0.287 | 0.199 | 0.064 | 0.160 |
| 250  | 42.75 | 42.44 | 25.95 | 1.34 | 7.07 | 128.69 | 0.415 | 0.265 | 0.197 | 0.064 | 0.173 |
| 500  | 42.65 | 42.33 | 26.22 | 1.37 | 7.23 | 134.16 | 0.425 | 0.272 | 0.204 | 0.070 | 0.187 |
| 1000 | 42.58 | 42.34 | 26.82 | 1.38 | 7.05 | 134.28 | 0.429 | 0.265 | 0.199 | 0.073 | 0.147 |
| 2000 | 42.61 | 42.25 | 26.76 | 1.42 | 7.21 | 136.80 | 0.441 | 0.271 | 0.203 | 0.056 | 0.182 |

|      |       |       |       |      |      |        |       |       |       |       |       |
|------|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 42.73 | 42.44 | 25.65 | 1.31 | 6.52 | 103.11 | 0.41  | 0.24  | 0.158 | 0.102 | 0.525 |
| 250  | 42.53 | 42.41 | 27.36 | 1.32 | 6.09 | 105.72 | 0.418 | 0.246 | 0.154 | 0.072 | 0.325 |
| 500  | 42.47 | 42.10 | 27.45 | 1.33 | 6.25 | 109.62 | 0.418 | 0.236 | 0.158 | 0.078 | 0.330 |
| 1000 | 42.41 | 42.10 | 27.97 | 1.32 | 6.14 | 110.52 | 0.429 | 0.232 | 0.157 | 0.078 | 0.285 |
| 2000 | 42.42 | 41.98 | 27.90 | 1.33 | 6.38 | 113.09 | 0.448 | 0.239 | 0.161 | 0.063 | 0.324 |
| 0    | 43.01 | 42.74 | 26.14 | 1.24 | 6.42 | 111.40 | 0.381 | 0.239 | 0.170 | 0.104 | 0.551 |
| 250  | 42.72 | 42.40 | 27.70 | 1.30 | 6.29 | 125.07 | 0.403 | 0.236 | 0.179 | 0.087 | 0.434 |
| 500  | 42.55 | 42.20 | 27.72 | 1.37 | 6.57 | 130.83 | 0.426 | 0.248 | 0.188 | 0.098 | 0.454 |
| 1000 | 42.48 | 42.07 | 27.98 | 1.46 | 6.56 | 131.31 | 0.456 | 0.248 | 0.187 | 0.126 | 0.387 |
| 2000 | 42.15 | 41.67 | 27.57 | 1.61 | 6.92 | 135.69 | 0.506 | 0.265 | 0.196 | 0.103 | 0.490 |
| 0    | 43.77 | 43.49 | 25.58 | 1.24 | 6.72 | 103.05 | 0.375 | 0.246 | 0.160 | 0.086 | 0.271 |
| 250  | 43.57 | 43.26 | 27.30 | 1.22 | 6.20 | 106.51 | 0.370 | 0.228 | 0.155 | 0.063 | 0.212 |
| 500  | 43.48 | 43.16 | 27.58 | 1.24 | 6.37 | 110.77 | 0.379 | 0.235 | 0.160 | 0.069 | 0.206 |
| 1000 | 43.51 | 43.16 | 28.06 | 1.26 | 6.18 | 109.45 | 0.385 | 0.228 | 0.155 | 0.071 | 0.165 |
| 2000 | 43.42 | 43.04 | 28.13 | 1.31 | 6.34 | 111.70 | 0.401 | 0.234 | 0.158 | 0.053 | 0.181 |
| 0    | 44.14 | 43.87 | 27.57 | 1.17 | 6.06 | 108.35 | 0.353 | 0.220 | 0.156 | 0.109 | 1.122 |
| 250  | 43.97 | 43.68 | 29.64 | 1.15 | 5.60 | 116.91 | 0.346 | 0.204 | 0.157 | 0.076 | 0.783 |
| 500  | 43.88 | 43.58 | 29.72 | 1.17 | 5.80 | 122.63 | 0.354 | 0.212 | 0.164 | 0.078 | 0.895 |
| 1000 | 43.91 | 43.59 | 30.21 | 1.20 | 5.72 | 124.00 | 0.363 | 0.209 | 0.163 | 0.084 | 0.811 |
| 2000 | 43.84 | 43.49 | 30.25 | 1.26 | 5.93 | 128.78 | 0.380 | 0.217 | 0.169 | 0.080 | 1.032 |
| 0    | 44.41 | 44.06 | 28.41 | 1.28 | 5.80 | 101.09 | 0.383 | 0.210 | 0.142 | 0.079 | 0.206 |
| 250  | 44.17 | 43.76 | 30.68 | 1.30 | 5.37 | 108.46 | 0.390 | 0.195 | 0.141 | 0.073 | 0.239 |
| 500  | 43.97 | 43.54 | 31.04 | 1.37 | 5.63 | 117.54 | 0.413 | 0.206 | 0.151 | 0.110 | 0.410 |
| 1000 | 43.97 | 43.54 | 31.04 | 1.37 | 5.63 | 117.54 | 0.413 | 0.206 | 0.151 | 0.110 | 0.410 |
| 2000 | 43.97 | 43.54 | 31.04 | 1.37 | 5.63 | 117.54 | 0.413 | 0.206 | 0.151 | 0.110 | 0.410 |
| 0    | 42.61 | 42.56 | 26.10 | 1.20 | 6.35 | 110.26 | 0.371 | 0.237 | 0.168 | 0.083 | 0.159 |
| 250  | 42.63 | 42.36 | 27.01 | 1.17 | 5.90 | 117.75 | 0.364 | 0.222 | 0.168 | 0.052 | 0.131 |
| 500  | 42.55 | 42.27 | 27.86 | 1.19 | 6.07 | 122.25 | 0.370 | 0.228 | 0.175 | 0.055 | 0.129 |
| 1000 | 42.59 | 42.29 | 26.36 | 1.20 | 5.91 | 121.75 | 0.375 | 0.222 | 0.171 | 0.057 | 0.102 |
| 2000 | 42.53 | 42.22 | 28.41 | 1.23 | 6.07 | 124.98 | 0.384 | 0.229 | 0.175 | 0.047 | 0.135 |
| 0    | 43.20 | 42.93 | 26.61 | 1.23 | 6.37 | 112.40 | 0.377 | 0.236 | 0.168 | 0.110 | 0.635 |
| 250  | 43.06 | 42.79 | 28.49 | 1.18 | 5.96 | 122.21 | 0.364 | 0.222 | 0.171 | 0.064 | 0.375 |
| 500  | 42.99 | 42.72 | 28.51 | 1.19 | 6.17 | 127.76 | 0.369 | 0.230 | 0.178 | 0.069 | 0.411 |
| 1000 | 43.03 | 42.74 | 28.89 | 1.22 | 6.07 | 128.73 | 0.376 | 0.226 | 0.177 | 0.071 | 0.344 |
| 2000 | 42.97 | 42.69 | 28.84 | 1.25 | 6.30 | 134.09 | 0.385 | 0.235 | 0.185 | 0.061 | 0.427 |
| 0    | 44.60 | 44.50 | 28.20 | 1.19 | 5.82 | 100.80 | 0.353 | 0.208 | 0.142 | 0.059 | 0.118 |
| 250  | 44.52 | 44.16 | 29.94 | 1.24 | 5.52 | 106.78 | 0.369 | 0.199 | 0.142 | 0.063 | 0.160 |
| 500  | 44.35 | 43.97 | 30.18 | 1.29 | 5.72 | 112.70 | 0.386 | 0.207 | 0.149 | 0.075 | 0.166 |
| 1000 | 44.33 | 43.90 | 30.74 | 1.36 | 5.65 | 113.46 | 0.407 | 0.205 | 0.147 | 0.077 | 0.128 |
| 2000 | 44.15 | 43.68 | 30.49 | 1.44 | 5.85 | 115.60 | 0.434 | 0.213 | 0.151 | 0.059 | 0.172 |
| 0    | 43.15 | 42.86 | 25.81 | 1.27 | 6.63 | 105.92 | 0.391 | 0.246 | 0.163 | 0.105 | 0.294 |
| 250  | 42.97 | 42.68 | 27.21 | 1.23 | 6.29 | 115.99 | 0.379 | 0.235 | 0.170 | 0.072 | 0.208 |
| 500  | 42.89 | 42.60 | 27.16 | 1.25 | 6.52 | 121.00 | 0.387 | 0.244 | 0.177 | 0.079 | 0.281 |
| 1000 | 42.93 | 42.62 | 27.51 | 1.27 | 6.44 | 122.45 | 0.393 | 0.240 | 0.177 | 0.083 | 0.185 |
| 2000 | 42.90 | 42.58 | 27.40 | 1.30 | 6.55 | 124.64 | 0.403 | 0.245 | 0.181 | 0.067 | 0.259 |



|      |       |       |       |      |      |        |       |       |       |       |       |
|------|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 43.47 | 42.80 | 26.40 | 1.11 | 5.11 | 106.91 | 0.370 | 0.270 | 0.159 | 0.117 | 1.463 |
| 250  | 43.00 | 42.80 | 26.40 | 1.07 | 5.47 | 110.42 | 0.370 | 0.270 | 0.152 | 0.115 | 1.086 |
| 500  | 42.98 | 42.73 | 29.02 | 1.07 | 5.57 | 114.64 | 0.377 | 0.208 | 0.157 | 0.127 | 1.334 |
| 1000 | 43.01 | 42.74 | 29.40 | 1.07 | 5.45 | 113.42 | 0.358 | 0.203 | 0.154 | 0.135 | 1.351 |
| 2000 | 42.99 | 42.71 | 29.45 | 1.11 | 5.50 | 114.63 | 0.344 | 0.205 | 0.155 | 0.134 | 1.855 |
| 0    | 43.47 | 43.20 | 26.69 | 1.22 | 6.32 | 111.67 | 0.376 | 0.233 | 0.166 | 0.096 | 0.254 |
| 250  | 43.30 | 43.03 | 28.01 | 1.16 | 5.75 | 119.02 | 0.354 | 0.213 | 0.164 | 0.074 | 0.251 |
| 500  | 43.22 | 42.95 | 28.99 | 1.17 | 5.90 | 123.84 | 0.359 | 0.219 | 0.170 | 0.078 | 0.234 |
| 1000 | 43.25 | 42.95 | 29.44 | 1.19 | 5.77 | 123.29 | 0.365 | 0.214 | 0.167 | 0.078 | 0.214 |
| 2000 | 43.22 | 42.90 | 29.56 | 1.22 | 5.84 | 125.11 | 0.375 | 0.217 | 0.168 | 0.064 | 0.306 |
| 0    | 43.14 | 42.76 | 24.09 | 1.16 | 7.55 | 106.60 | 0.449 | 0.201 | 0.176 | 0.070 | 0.266 |
| 250  | 42.98 | 42.58 | 26.45 | 1.40 | 6.64 | 108.57 | 0.433 | 0.248 | 0.163 | 0.088 | 0.310 |
| 500  | 42.86 | 42.46 | 26.59 | 1.42 | 6.81 | 111.95 | 0.444 | 0.255 | 0.168 | 0.097 | 0.318 |
| 1000 | 42.90 | 42.46 | 26.95 | 1.46 | 6.67 | 110.80 | 0.451 | 0.250 | 0.164 | 0.094 | 0.274 |
| 2000 | 42.85 | 42.39 | 26.91 | 1.50 | 6.82 | 111.52 | 0.466 | 0.256 | 0.165 | 0.077 | 0.362 |
| 0    | 44.85 | 44.49 | 29.79 | 1.26 | 5.48 | 102.54 | 0.373 | 0.196 | 0.137 | 0.168 | 3.760 |
| 250  | 44.64 | 44.25 | 32.03 | 1.24 | 4.95 | 106.67 | 0.369 | 0.178 | 0.133 | 0.154 | 2.020 |
| 500  | 44.48 | 44.07 | 32.24 | 1.28 | 5.08 | 111.11 | 0.383 | 0.183 | 0.137 | 0.175 | 2.270 |
| 1000 | 44.46 | 44.00 | 32.52 | 1.36 | 5.05 | 110.70 | 0.406 | 0.183 | 0.135 | 0.170 | 2.010 |
| 2000 | 44.44 | 44.00 | 32.52 | 1.36 | 5.05 | 110.70 | 0.406 | 0.183 | 0.135 | 0.170 | 2.010 |
| 0    | 42.77 | 42.49 | 26.16 | 1.28 | 6.30 | 109.04 | 0.398 | 0.236 | 0.166 | 0.095 | 0.221 |
| 250  | 42.57 | 42.27 | 28.26 | 1.21 | 5.74 | 115.78 | 0.378 | 0.216 | 0.163 | 0.074 | 0.206 |
| 500  | 42.46 | 42.17 | 28.44 | 1.23 | 5.84 | 119.87 | 0.383 | 0.220 | 0.168 | 0.080 | 0.211 |
| 1000 | 42.51 | 42.18 | 29.01 | 1.25 | 5.70 | 119.72 | 0.389 | 0.215 | 0.164 | 0.076 | 0.192 |
| 2000 | 42.46 | 42.10 | 29.11 | 1.28 | 5.75 | 121.04 | 0.401 | 0.217 | 0.165 | 0.067 | 0.247 |
| 0    | 43.09 | 42.80 | 26.32 | 1.25 | 6.28 | 108.64 | 0.386 | 0.233 | 0.164 | 0.087 | 0.155 |
| 250  | 42.90 | 42.61 | 28.40 | 1.18 | 5.75 | 116.29 | 0.364 | 0.215 | 0.163 | 0.068 | 0.157 |
| 500  | 42.82 | 42.53 | 28.43 | 1.19 | 5.93 | 120.90 | 0.370 | 0.222 | 0.169 | 0.078 | 0.136 |
| 1000 | 42.85 | 42.54 | 28.90 | 1.21 | 5.83 | 121.19 | 0.376 | 0.218 | 0.167 | 0.079 | 0.144 |
| 2000 | 42.82 | 42.47 | 28.99 | 1.24 | 5.93 | 123.58 | 0.385 | 0.222 | 0.170 | 0.060 | 0.199 |
| 0    | 43.50 | 43.14 | 25.25 | 1.47 | 7.37 | 115.60 | 0.447 | 0.272 | 0.182 | 0.073 | 0.477 |
| 250  | 43.36 | 43.02 | 27.19 | 1.34 | 6.54 | 119.53 | 0.411 | 0.242 | 0.175 | 0.079 | 0.353 |
| 500  | 43.27 | 42.93 | 27.32 | 1.35 | 6.63 | 123.47 | 0.413 | 0.246 | 0.180 | 0.089 | 0.358 |
| 1000 | 43.32 | 42.96 | 27.83 | 1.36 | 6.45 | 124.23 | 0.417 | 0.239 | 0.176 | 0.088 | 0.339 |
| 2000 | 43.29 | 42.91 | 28.10 | 1.38 | 6.58 | 126.16 | 0.423 | 0.241 | 0.179 | 0.072 | 0.461 |
| 0    | 43.51 | 43.03 | 25.49 | 1.24 | 6.54 | 99.33  | 0.361 | 0.242 | 0.155 | 0.102 | 0.243 |
| 250  | 43.11 | 42.82 | 27.04 | 1.17 | 6.00 | 103.45 | 0.361 | 0.233 | 0.152 | 0.069 | 0.222 |
| 500  | 43.01 | 42.72 | 27.08 | 1.20 | 6.17 | 108.94 | 0.370 | 0.230 | 0.157 | 0.077 | 0.185 |
| 1000 | 43.03 | 42.70 | 27.45 | 1.23 | 6.02 | 106.09 | 0.378 | 0.224 | 0.154 | 0.076 | 0.193 |
| 2000 | 42.95 | 42.60 | 27.54 | 1.20 | 6.12 | 107.94 | 0.394 | 0.229 | 0.156 | 0.062 | 0.247 |
| 0    | 42.92 | 42.65 | 25.71 | 1.24 | 6.53 | 110.88 | 0.384 | 0.246 | 0.172 | 0.063 | 0.122 |
| 250  | 42.74 | 42.48 | 27.80 | 1.17 | 6.04 | 120.33 | 0.363 | 0.226 | 0.172 | 0.062 | 0.179 |
| 500  | 42.66 | 42.39 | 27.83 | 1.19 | 6.24 | 124.91 | 0.372 | 0.234 | 0.179 | 0.071 | 0.155 |
| 1000 | 42.69 | 42.39 | 28.30 | 1.21 | 6.14 | 126.11 | 0.377 | 0.231 | 0.177 | 0.082 | 0.168 |
| 2000 | 42.61 | 42.33 | 28.47 | 1.26 | 6.33 | 131.07 | 0.391 | 0.238 | 0.183 | 0.100 | 0.239 |

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|------|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 41.54 | 44.24 | 20.40 | 1.71 | 5.55 | 107.55 | 0.355 | 0.200 | 0.145 | 0.073 | 0.242 |
| 250  | 40.73 | 44.03 | 31.73 | 1.15 | 5.10 | 114.50 | 0.355 | 0.154 | 0.144 | 0.076 | 0.236 |
| 500  | 41.24 | 43.93 | 31.74 | 1.16 | 5.20 | 119.15 | 0.355 | 0.149 | 0.141 | 0.078 | 0.211 |
| 1000 | 42.28 | 43.93 | 32.13 | 1.15 | 5.20 | 119.90 | 0.355 | 0.148 | 0.147 | 0.078 | 0.209 |
| 2000 | 43.22 | 43.86 | 32.12 | 1.23 | 5.32 | 121.16 | 0.370 | 0.193 | 0.150 | 0.072 | 0.257 |
| 0    | 43.81 | 43.37 | 24.60 | 1.56 | 7.91 | 93.10  | 0.474 | 0.290 | 0.158 | 0.104 | 0.206 |
| 250  | 43.53 | 43.05 | 25.69 | 1.56 | 7.58 | 102.75 | 0.475 | 0.280 | 0.150 | 0.083 | 0.263 |
| 500  | 43.38 | 42.87 | 25.89 | 1.62 | 7.82 | 106.36 | 0.494 | 0.290 | 0.163 | 0.100 | 0.280 |
| 1000 | 43.38 | 42.83 | 26.31 | 1.66 | 7.66 | 106.38 | 0.500 | 0.285 | 0.161 | 0.097 | 0.258 |
| 2000 | 43.24 | 42.65 | 26.39 | 1.75 | 7.82 | 109.91 | 0.536 | 0.292 | 0.164 | 0.071 | 0.440 |
| 0    | 43.10 | 42.81 | 24.92 | 1.33 | 7.14 | 111.18 | 0.410 | 0.265 | 0.178 | 0.066 | 0.214 |
| 250  | 42.93 | 42.64 | 26.35 | 1.29 | 6.85 | 125.23 | 0.399 | 0.256 | 0.189 | 0.070 | 0.214 |
| 500  | 42.84 | 42.55 | 26.33 | 1.32 | 7.12 | 131.71 | 0.410 | 0.266 | 0.199 | 0.080 | 0.205 |
| 1000 | 42.87 | 42.55 | 26.71 | 1.35 | 7.03 | 133.69 | 0.417 | 0.243 | 0.199 | 0.078 | 0.185 |
| 2000 | 42.82 | 42.48 | 26.73 | 1.39 | 7.18 | 136.97 | 0.431 | 0.269 | 0.204 | 0.064 | 0.260 |
| 0    | 44.34 | 43.90 | 27.04 | 1.48 | 6.55 | 101.77 | 0.442 | 0.238 | 0.150 | 0.079 | 0.162 |
| 250  | 44.01 | 43.51 | 28.37 | 1.52 | 6.33 | 105.87 | 0.458 | 0.231 | 0.148 | 0.089 | 0.262 |
| 500  | 43.81 | 43.29 | 28.43 | 1.59 | 6.61 | 110.96 | 0.481 | 0.243 | 0.155 | 0.105 | 0.297 |
| 1000 | 43.81 | 43.23 | 28.69 | 1.66 | 6.60 | 112.21 | 0.504 | 0.243 | 0.156 | 0.101 | 0.278 |
| 2000 | 43.81 | 43.23 | 28.69 | 1.66 | 6.60 | 112.21 | 0.504 | 0.243 | 0.156 | 0.101 | 0.278 |
| 0    | 42.99 | 42.70 | 25.54 | 1.29 | 6.69 | 107.29 | 0.399 | 0.249 | 0.167 | 0.089 | 0.167 |
| 250  | 42.81 | 42.52 | 27.29 | 1.24 | 6.35 | 119.33 | 0.385 | 0.238 | 0.174 | 0.065 | 0.168 |
| 500  | 42.72 | 42.43 | 27.23 | 1.27 | 6.60 | 125.01 | 0.394 | 0.248 | 0.183 | 0.072 | 0.184 |
| 1000 | 42.76 | 42.45 | 27.53 | 1.30 | 6.59 | 128.48 | 0.403 | 0.247 | 0.185 | 0.070 | 0.153 |
| 2000 | 42.72 | 42.40 | 27.51 | 1.34 | 6.80 | 132.92 | 0.417 | 0.255 | 0.192 | 0.058 | 0.213 |
| 0    | 42.94 | 42.60 | 25.82 | 1.37 | 6.62 | 110.84 | 0.422 | 0.248 | 0.171 | 0.081 | 0.352 |
| 250  | 42.74 | 42.40 | 27.86 | 1.30 | 6.09 | 120.83 | 0.405 | 0.229 | 0.173 | 0.069 | 0.319 |
| 500  | 42.64 | 42.30 | 28.03 | 1.32 | 6.23 | 125.97 | 0.412 | 0.234 | 0.179 | 0.078 | 0.359 |
| 1000 | 42.68 | 42.31 | 28.41 | 1.35 | 6.07 | 124.69 | 0.418 | 0.228 | 0.175 | 0.078 | 0.363 |
| 2000 | 42.61 | 42.22 | 28.61 | 1.39 | 6.19 | 128.11 | 0.432 | 0.233 | 0.178 | 0.066 | 0.510 |
| 0    | 42.94 | 42.68 | 25.86 | 1.24 | 6.58 | 113.51 | 0.383 | 0.245 | 0.175 | 0.093 | 0.798 |
| 250  | 42.74 | 42.47 | 27.87 | 1.19 | 6.07 | 122.41 | 0.371 | 0.227 | 0.175 | 0.070 | 0.475 |
| 500  | 42.66 | 42.38 | 28.01 | 1.22 | 6.24 | 127.67 | 0.378 | 0.234 | 0.181 | 0.081 | 0.523 |
| 1000 | 42.69 | 42.38 | 28.39 | 1.23 | 6.10 | 126.79 | 0.384 | 0.229 | 0.178 | 0.085 | 0.493 |
| 2000 | 42.54 | 42.31 | 28.46 | 1.27 | 6.21 | 129.18 | 0.395 | 0.234 | 0.180 | 0.069 | 0.674 |
| 0    | 44.73 | 44.44 | 29.12 | 1.13 | 5.41 | 96.73  | 0.336 | 0.194 | 0.132 | 0.077 | 0.221 |
| 250  | 44.39 | 44.03 | 30.94 | 1.18 | 5.04 | 100.27 | 0.354 | 0.182 | 0.129 | 0.075 | 0.225 |
| 500  | 44.18 | 43.78 | 31.05 | 1.26 | 5.25 | 105.57 | 0.378 | 0.191 | 0.135 | 0.090 | 0.257 |
| 1000 | 44.18 | 43.78 | 31.05 | 1.26 | 5.25 | 105.57 | 0.378 | 0.191 | 0.135 | 0.090 | 0.257 |
| 2000 | 44.18 | 43.78 | 31.05 | 1.26 | 5.25 | 105.57 | 0.378 | 0.191 | 0.135 | 0.090 | 0.257 |
| 0    | 43.02 | 42.75 | 26.33 | 1.21 | 6.36 | 107.16 | 0.375 | 0.237 | 0.162 | 0.095 | 0.352 |
| 250  | 42.86 | 42.58 | 28.16 | 1.16 | 5.87 | 116.29 | 0.361 | 0.219 | 0.164 | 0.067 | 0.237 |
| 500  | 42.78 | 42.50 | 28.39 | 1.18 | 6.04 | 122.57 | 0.366 | 0.226 | 0.172 | 0.071 | 0.212 |
| 1000 | 42.81 | 42.51 | 28.81 | 1.20 | 5.92 | 123.04 | 0.373 | 0.222 | 0.170 | 0.068 | 0.198 |
| 2000 | 42.76 | 42.44 | 29.04 | 1.24 | 6.03 | 126.87 | 0.385 | 0.226 | 0.174 | 0.061 | 0.261 |

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|----|------|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 41 | 0    | 43.05 | 42.76 | 26.70 | 1.70 | 6.07 | 110.17 | 0.311 | 0.311 | 0.164 | 0.074 | 1.050 |
|    | 250  | 42.86 | 42.57 | 26.70 | 1.16 | 5.84 | 120.91 | 0.313 | 0.313 | 0.168 | 0.072 | 0.745 |
|    | 500  | 42.77 | 42.50 | 26.61 | 1.19 | 6.04 | 127.19 | 0.315 | 0.315 | 0.176 | 0.082 | 0.995 |
|    | 1000 | 42.80 | 42.50 | 29.20 | 1.22 | 5.98 | 129.36 | 0.317 | 0.317 | 0.176 | 0.089 | 1.035 |
|    | 2000 | 42.74 | 42.42 | 29.31 | 1.22 | 6.10 | 135.90 | 0.319 | 0.319 | 0.184 | 0.095 | 1.498 |
| 45 | 0    | 43.51 | 43.17 | 25.03 | 1.30 | 6.01 | 113.05 | 0.405 | 0.405 | 0.175 | 0.086 | 0.552 |
|    | 250  | 43.11 | 42.68 | 28.50 | 1.41 | 6.25 | 123.02 | 0.443 | 0.443 | 0.172 | 0.205 | 0.394 |
|    | 500  | 42.77 | 42.28 | 28.67 | 1.53 | 6.50 | 132.58 | 0.490 | 0.490 | 0.184 | 0.104 | 0.382 |
|    | 1000 | 43.44 | 43.14 | 33.14 | 1.11 | 4.44 | 133.14 | 1.111 | 1.111 | 1.111 | 1.111 | 1.111 |
|    | 2000 | 43.44 | 43.14 | 33.14 | 1.11 | 4.44 | 133.14 | 1.111 | 1.111 | 1.111 | 1.111 | 1.111 |
| 46 | 0    | 42.91 | 42.60 | 23.97 | 1.40 | 7.74 | 110.91 | 0.432 | 0.432 | 0.184 | 0.094 | 0.576 |
|    | 250  | 42.72 | 42.40 | 25.42 | 1.34 | 7.14 | 113.98 | 0.417 | 0.417 | 0.178 | 0.067 | 0.329 |
|    | 500  | 42.62 | 42.29 | 25.44 | 1.37 | 7.38 | 117.83 | 0.427 | 0.427 | 0.184 | 0.077 | 0.308 |
|    | 1000 | 42.65 | 42.30 | 25.72 | 1.39 | 7.20 | 116.74 | 0.431 | 0.431 | 0.181 | 0.078 | 0.621 |
|    | 2000 | 42.60 | 42.33 | 25.94 | 1.42 | 7.34 | 120.08 | 0.442 | 0.442 | 0.184 | 0.063 | 0.480 |
| 47 | 0    | 42.82 | 42.55 | 26.08 | 1.22 | 6.36 | 105.53 | 0.379 | 0.379 | 0.161 | 0.093 | 0.151 |
|    | 250  | 42.66 | 42.39 | 27.82 | 1.16 | 5.91 | 114.74 | 0.362 | 0.362 | 0.164 | 0.058 | 0.154 |
|    | 500  | 42.57 | 42.30 | 27.88 | 1.19 | 6.12 | 120.60 | 0.370 | 0.370 | 0.172 | 0.061 | 0.126 |
|    | 1000 | 42.61 | 42.32 | 28.22 | 1.21 | 6.03 | 121.72 | 0.376 | 0.376 | 0.172 | 0.059 | 0.128 |
|    | 2000 | 42.57 | 42.26 | 28.48 | 1.24 | 6.16 | 126.34 | 0.387 | 0.387 | 0.177 | 0.051 | 0.203 |
| 48 | 0    | 42.91 | 42.63 | 25.14 | 1.27 | 6.83 | 102.07 | 0.393 | 0.393 | 0.163 | 0.094 | 0.503 |
|    | 250  | 42.70 | 42.39 | 26.67 | 1.26 | 6.55 | 113.57 | 0.392 | 0.392 | 0.169 | 0.059 | 0.283 |
|    | 500  | 42.60 | 42.29 | 26.70 | 1.30 | 6.85 | 119.55 | 0.404 | 0.404 | 0.178 | 0.065 | 0.279 |
|    | 1000 | 42.62 | 42.29 | 26.97 | 1.32 | 6.76 | 120.94 | 0.412 | 0.412 | 0.178 | 0.062 | 0.229 |
|    | 2000 | 42.56 | 42.21 | 27.19 | 1.38 | 7.02 | 128.59 | 0.431 | 0.431 | 0.188 | 0.054 | 0.299 |
| 49 | 0    | 43.92 | 43.59 | 27.24 | 1.29 | 6.23 | 105.62 | 0.391 | 0.391 | 0.154 | 0.115 | 0.768 |
|    | 250  | 43.67 | 43.29 | 29.26 | 1.30 | 5.76 | 107.78 | 0.394 | 0.394 | 0.147 | 0.114 | 0.285 |
|    | 500  | 43.57 | 43.17 | 29.11 | 1.34 | 5.97 | 110.56 | 0.409 | 0.409 | 0.151 | 0.113 | 0.621 |
|    | 1000 | 43.57 | 43.14 | 29.33 | 1.39 | 5.90 | 109.57 | 0.423 | 0.423 | 0.149 | 0.099 | 0.576 |
|    | 2000 | 43.48 | 43.01 | 29.15 | 1.45 | 6.05 | 110.29 | 0.444 | 0.444 | 0.151 | 0.098 | 0.806 |
| 50 | 0    | 43.86 | 42.59 | 22.82 | 1.70 | 8.94 | 111.03 | 0.525 | 0.525 | 0.194 | 0.116 | 1.156 |
|    | 250  | 42.81 | 42.29 | 24.83 | 1.72 | 8.46 | 119.27 | 0.532 | 0.532 | 0.191 | 0.227 | 0.854 |
|    | 500  | 42.67 | 42.14 | 24.80 | 1.78 | 8.83 | 124.24 | 0.554 | 0.554 | 0.199 | 0.111 | 0.905 |
|    | 1000 | 42.71 | 42.13 | 25.15 | 1.82 | 8.75 | 124.89 | 0.565 | 0.565 | 0.198 | 0.101 | 0.794 |
|    | 2000 | 42.63 | 42.00 | 25.12 | 1.90 | 8.99 | 127.67 | 0.590 | 0.590 | 0.202 | 0.099 | 1.036 |
| 51 | 0    | 42.62 | 42.35 | 26.25 | 1.31 | 6.33 | 103.02 | 0.409 | 0.409 | 0.156 | 0.123 | 0.398 |
|    | 250  | 42.51 | 42.15 | 28.56 | 1.26 | 5.63 | 103.19 | 0.392 | 0.392 | 0.149 | 0.178 | 0.263 |
|    | 500  | 42.41 | 42.05 | 28.52 | 1.26 | 5.80 | 105.55 | 0.402 | 0.402 | 0.147 | 0.100 | 0.281 |
|    | 1000 | 42.45 | 42.05 | 28.70 | 1.32 | 5.70 | 104.15 | 0.412 | 0.412 | 0.144 | 0.088 | 0.213 |
|    | 2000 | 42.40 | 41.98 | 28.73 | 1.36 | 5.79 | 104.46 | 0.425 | 0.425 | 0.145 | 0.072 | 0.284 |
| 52 | 0    | 43.61 | 43.54 | 27.98 | 1.23 | 6.02 | 111.64 | 0.373 | 0.373 | 0.159 | 0.096 | 0.474 |
|    | 250  | 43.69 | 43.39 | 30.90 | 1.16 | 5.29 | 118.03 | 0.352 | 0.352 | 0.152 | 0.111 | 0.239 |
|    | 500  | 43.61 | 43.30 | 31.05 | 1.17 | 5.43 | 122.63 | 0.356 | 0.356 | 0.157 | 0.087 | 0.296 |
|    | 1000 | 43.64 | 43.31 | 31.51 | 1.19 | 5.34 | 122.53 | 0.363 | 0.363 | 0.155 | 0.076 | 0.263 |
|    | 2000 | 43.61 | 43.26 | 31.48 | 1.22 | 5.41 | 123.63 | 0.371 | 0.371 | 0.156 | 0.068 | 0.343 |

|      |    |       |       |       |      |      |        |       |       |       |       |       |
|------|----|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 55 | 43.10 | 42.71 | 25.45 | 1.41 | 6.91 | 111.50 | 0.437 | 0.255 | 0.175 | 0.070 | 0.268 |
| 250  |    | 42.03 | 42.44 | 27.59 | 1.41 | 6.47 | 115.01 | 0.445 | 0.241 | 0.167 | 0.078 | 0.267 |
| 500  |    | 42.21 | 42.28 | 27.77 | 1.40 | 6.71 | 119.61 | 0.452 | 0.233 | 0.174 | 0.100 | 0.333 |
| 1000 |    | 42.74 | 42.28 | 27.57 | 1.53 | 8.64 | 117.45 | 0.477 | 0.250 | 0.170 | 0.086 | 0.252 |
| 2000 |    | 42.66 | 42.14 | 27.38 | 1.67 | 6.96 | 119.48 | 0.500 | 0.260 | 0.174 | 0.093 | 0.513 |
| 0    | 54 | 43.98 | 43.67 | 26.94 | 1.27 | 6.07 | 100.95 | 0.367 | 0.221 | 0.148 | 0.078 | 0.920 |
| 250  |    | 43.78 | 43.43 | 29.27 | 1.70 | 5.38 | 100.46 | 0.363 | 0.197 | 0.137 | 0.104 | 0.394 |
| 500  |    | 43.65 | 43.29 | 29.11 | 1.24 | 5.55 | 102.97 | 0.374 | 0.204 | 0.141 | 0.102 | 0.541 |
| 1000 |    | 43.67 | 43.27 | 29.52 | 1.27 | 5.43 | 101.68 | 0.385 | 0.200 | 0.137 | 0.094 | 0.479 |
| 2000 |    | 43.59 | 43.15 | 29.54 | 1.33 | 5.52 | 102.49 | 0.404 | 0.204 | 0.138 | 0.092 | 0.659 |
| 0    | 55 | 44.23 | 43.91 | 28.61 | 1.20 | 5.56 | 99.08  | 0.360 | 0.201 | 0.138 | 0.080 | 0.224 |
| 250  |    | 44.10 | 43.78 | 31.76 | 1.17 | 4.83 | 107.11 | 0.338 | 0.176 | 0.134 | 0.060 | 0.194 |
| 500  |    | 43.99 | 43.68 | 31.93 | 1.12 | 4.93 | 111.98 | 0.357 | 0.180 | 0.140 | 0.085 | 0.250 |
| 1000 |    | 44.04 | 43.70 | 32.35 | 1.15 | 4.82 | 110.59 | 0.346 | 0.176 | 0.136 | 0.072 | 0.201 |
| 2000 |    | 44.00 | 43.63 | 32.63 | 1.19 | 4.89 | 113.35 | 0.353 | 0.179 | 0.138 | 0.067 | 0.280 |
| 0    | 56 | 43.24 | 43.67 | 24.58 | 1.44 | 7.72 | 104.05 | 0.432 | 0.280 | 0.168 | 0.097 | 0.390 |
| 250  |    | 44.01 | 43.60 | 26.51 | 1.44 | 7.25 | 109.86 | 0.434 | 0.265 | 0.165 | 0.077 | 0.244 |
| 500  |    | 43.67 | 43.46 | 26.42 | 1.48 | 7.58 | 113.89 | 0.448 | 0.278 | 0.172 | 0.106 | 0.274 |
| 1000 |    | 43.90 | 43.45 | 26.73 | 1.52 | 7.44 | 117.38 | 0.459 | 0.272 | 0.169 | 0.086 | 0.227 |
| 2000 |    | 43.81 | 43.32 | 26.88 | 1.59 | 7.62 | 116.16 | 0.481 | 0.280 | 0.172 | 0.065 | 0.287 |
| 0    | 57 | 44.20 | 43.85 | 27.63 | 1.29 | 5.97 | 101.16 | 0.388 | 0.217 | 0.146 | 0.095 | 0.393 |
| 250  |    | 43.98 | 43.60 | 29.60 | 1.20 | 5.45 | 103.09 | 0.385 | 0.199 | 0.139 | 0.100 | 0.272 |
| 500  |    | 43.85 | 43.46 | 29.48 | 1.30 | 5.62 | 105.87 | 0.392 | 0.206 | 0.143 | 0.097 | 0.347 |
| 1000 |    | 43.90 | 43.47 | 29.77 | 1.34 | 5.52 | 104.41 | 0.404 | 0.202 | 0.140 | 0.082 | 0.268 |
| 2000 |    | 43.84 | 43.38 | 29.87 | 1.39 | 5.61 | 105.55 | 0.420 | 0.206 | 0.141 | 0.075 | 0.353 |
| 0    | 58 | 43.65 | 43.31 | 26.54 | 1.32 | 6.36 | 104.43 | 0.400 | 0.231 | 0.157 | 0.455 | 6.920 |
| 250  |    | 43.48 | 43.13 | 29.12 | 1.26 | 5.62 | 108.58 | 0.385 | 0.207 | 0.148 | 0.399 | 4.440 |
| 500  |    | 43.36 | 43.01 | 29.18 | 1.20 | 5.79 | 112.55 | 0.392 | 0.214 | 0.153 | 0.337 | 5.050 |
| 1000 |    | 43.41 | 43.01 | 29.35 | 1.32 | 5.70 | 110.99 | 0.404 | 0.211 | 0.150 | 0.365 | 4.780 |
| 2000 |    | 43.35 | 42.92 | 29.64 | 1.38 | 5.84 | 113.61 | 0.422 | 0.216 | 0.153 | 0.383 | 6.060 |
| 0    | 59 | 43.08 | 42.72 | 27.07 | 1.41 | 6.05 | 125.27 | 0.436 | 0.255 | 0.184 | 0.085 | 0.385 |
| 250  |    | 42.91 | 42.54 | 29.46 | 1.33 | 6.00 | 125.89 | 0.413 | 0.224 | 0.170 | 0.073 | 0.310 |
| 500  |    | 42.77 | 42.42 | 29.48 | 1.35 | 6.13 | 129.41 | 0.418 | 0.230 | 0.175 | 0.088 | 0.332 |
| 1000 |    | 42.84 | 42.44 | 29.72 | 1.37 | 5.99 | 127.09 | 0.425 | 0.225 | 0.170 | 0.077 | 0.301 |
| 2000 |    | 42.80 | 42.38 | 29.97 | 1.40 | 6.04 | 128.86 | 0.434 | 0.227 | 0.171 | 0.067 | 0.389 |
| 0    | 60 | 44.01 | 44.49 | 28.24 | 1.25 | 6.05 | 108.37 | 0.369 | 0.216 | 0.153 | 0.097 | 0.510 |
| 250  |    | 44.05 | 44.33 | 31.14 | 1.17 | 5.26 | 114.18 | 0.347 | 0.189 | 0.146 | 0.067 | 0.340 |
| 500  |    | 44.54 | 44.22 | 31.26 | 1.17 | 5.38 | 118.54 | 0.349 | 0.194 | 0.151 | 0.084 | 0.361 |
| 1000 |    | 44.58 | 44.23 | 31.65 | 1.20 | 5.26 | 117.24 | 0.359 | 0.189 | 0.147 | 0.070 | 0.299 |
| 2000 |    | 44.52 | 44.14 | 31.98 | 1.25 | 5.35 | 120.41 | 0.374 | 0.193 | 0.150 | 0.066 | 0.366 |
| 0    | 61 | 44.27 | 44.39 | 28.26 | 1.17 | 5.96 | 107.75 | 0.348 | 0.214 | 0.152 | 0.511 | 9.560 |
| 250  |    | 44.42 | 44.15 | 30.85 | 1.16 | 5.37 | 116.53 | 0.345 | 0.194 | 0.150 | 0.425 | 6.560 |
| 500  |    | 44.33 | 44.02 | 30.80 | 1.19 | 5.58 | 122.41 | 0.357 | 0.202 | 0.158 | 0.442 | 7.530 |
| 1000 |    | 44.35 | 43.99 | 31.24 | 1.24 | 5.50 | 121.90 | 0.371 | 0.199 | 0.155 | 0.479 | 6.840 |
| 2000 |    | 44.25 | 43.84 | 30.09 | 1.37 | 6.13 | 127.74 | 0.410 | 0.222 | 0.169 | 0.578 | 8.500 |

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|------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 44.70 | 27.22 | 1.12 | 5.48 | 112.61 | 0.346 | 0.346 | 0.152 | 0.086 | 0.342 |
| 250  | 44.56 | 30.14 | 1.11 | 5.48 | 112.61 | 0.346 | 0.346 | 0.152 | 0.086 | 0.342 |
| 500  | 44.47 | 31.10 | 1.16 | 5.58 | 113.43 | 0.346 | 0.346 | 0.152 | 0.086 | 0.342 |
| 1000 | 44.50 | 31.71 | 1.17 | 5.41 | 111.75 | 0.347 | 0.347 | 0.153 | 0.069 | 0.252 |
| 2000 | 44.46 | 31.86 | 1.19 | 5.43 | 113.04 | 0.347 | 0.347 | 0.154 | 0.061 | 0.317 |
| 0    | 43.70 | 27.22 | 1.12 | 5.47 | 107.91 | 0.372 | 0.372 | 0.155 | 0.073 | 0.241 |
| 250  | 43.54 | 30.14 | 1.11 | 5.41 | 116.04 | 0.369 | 0.369 | 0.152 | 0.068 | 0.186 |
| 500  | 43.50 | 30.29 | 1.23 | 5.59 | 120.83 | 0.371 | 0.371 | 0.152 | 0.076 | 0.116 |
| 1000 | 43.42 | 30.65 | 1.26 | 5.40 | 119.73 | 0.386 | 0.386 | 0.156 | 0.064 | 0.169 |
| 2000 | 43.35 | 30.77 | 1.31 | 5.59 | 122.23 | 0.401 | 0.401 | 0.158 | 0.058 | 0.230 |
| 0    | 43.41 | 25.86 | 1.41 | 6.82 | 108.32 | 0.430 | 0.430 | 0.252 | 0.086 | 0.249 |
| 250  | 43.16 | 28.04 | 1.38 | 6.18 | 110.40 | 0.425 | 0.425 | 0.230 | 0.068 | 0.253 |
| 500  | 43.02 | 27.86 | 1.42 | 6.42 | 113.40 | 0.438 | 0.438 | 0.240 | 0.088 | 0.321 |
| 1000 | 43.06 | 28.11 | 1.47 | 6.32 | 111.83 | 0.452 | 0.452 | 0.236 | 0.075 | 0.251 |
| 2000 | 42.98 | 28.05 | 1.53 | 6.48 | 112.89 | 0.474 | 0.474 | 0.243 | 0.075 | 0.356 |
| 0    | 43.05 | 25.67 | 1.24 | 6.71 | 99.67  | 0.378 | 0.378 | 0.246 | 0.242 | 1.277 |
| 250  | 43.40 | 28.15 | 1.19 | 5.85 | 100.53 | 0.363 | 0.363 | 0.216 | 0.270 | 0.983 |
| 500  | 43.37 | 28.26 | 1.21 | 6.03 | 103.49 | 0.370 | 0.370 | 0.223 | 0.242 | 0.922 |
| 1000 | 43.40 | 28.59 | 1.24 | 5.88 | 101.86 | 0.378 | 0.378 | 0.217 | 0.218 | 0.799 |
| 2000 | 43.34 | 28.74 | 1.28 | 5.98 | 102.97 | 0.392 | 0.392 | 0.221 | 0.191 | 0.846 |
| 0    | 42.06 | 24.06 | 1.43 | 7.78 | 127.61 | 0.450 | 0.450 | 0.296 | 0.075 | 0.212 |
| 250  | 41.89 | 26.47 | 1.32 | 6.81 | 133.25 | 0.418 | 0.418 | 0.260 | 0.053 | 0.163 |
| 500  | 41.80 | 26.55 | 1.33 | 6.98 | 138.37 | 0.423 | 0.423 | 0.268 | 0.071 | 0.209 |
| 1000 | 41.83 | 27.06 | 1.35 | 6.84 | 139.43 | 0.427 | 0.427 | 0.282 | 0.058 | 0.168 |
| 2000 | 41.79 | 27.28 | 1.38 | 6.96 | 143.90 | 0.438 | 0.438 | 0.267 | 0.054 | 0.219 |
| 0    | 42.31 | 27.41 | 1.22 | 5.63 | 103.22 | 0.381 | 0.381 | 0.213 | 0.071 | 0.209 |
| 250  | 42.10 | 29.73 | 1.19 | 5.00 | 105.46 | 0.375 | 0.375 | 0.191 | 0.055 | 0.188 |
| 500  | 41.98 | 29.64 | 1.20 | 5.13 | 108.03 | 0.381 | 0.381 | 0.196 | 0.068 | 0.209 |
| 1000 | 42.02 | 29.98 | 1.24 | 5.03 | 106.78 | 0.392 | 0.392 | 0.192 | 0.059 | 0.178 |
| 2000 | 41.96 | 30.15 | 1.28 | 5.10 | 108.31 | 0.405 | 0.405 | 0.195 | 0.055 | 0.246 |
| 0    | 44.71 | 28.41 | 1.33 | 5.97 | 104.92 | 0.396 | 0.396 | 0.214 | 0.094 | 0.295 |
| 250  | 44.55 | 31.62 | 1.23 | 5.18 | 112.80 | 0.368 | 0.368 | 0.187 | 0.059 | 0.239 |
| 500  | 44.43 | 31.61 | 1.23 | 5.29 | 117.26 | 0.368 | 0.368 | 0.191 | 0.075 | 0.274 |
| 1000 | 44.49 | 32.02 | 1.26 | 5.19 | 116.41 | 0.376 | 0.376 | 0.187 | 0.062 | 0.229 |
| 2000 | 44.45 | 32.30 | 1.29 | 5.26 | 118.98 | 0.386 | 0.386 | 0.190 | 0.058 | 0.314 |
| 0    | 43.67 | 27.89 | 1.19 | 5.78 | 101.34 | 0.358 | 0.358 | 0.211 | 0.078 | 0.170 |
| 250  | 43.84 | 30.99 | 1.09 | 4.95 | 105.61 | 0.331 | 0.331 | 0.136 | 0.053 | 0.161 |
| 500  | 43.73 | 31.07 | 1.09 | 5.07 | 108.78 | 0.332 | 0.332 | 0.134 | 0.063 | 0.173 |
| 1000 | 43.77 | 31.59 | 1.12 | 4.90 | 108.13 | 0.341 | 0.341 | 0.130 | 0.056 | 0.141 |
| 2000 | 43.73 | 31.72 | 1.16 | 4.95 | 109.06 | 0.351 | 0.351 | 0.182 | 0.055 | 0.201 |
| 0    | 42.26 | 28.45 | 1.18 | 5.48 | 103.01 | 0.362 | 0.362 | 0.203 | 0.097 | 0.968 |
| 250  | 43.08 | 31.02 | 1.15 | 4.87 | 107.15 | 0.353 | 0.353 | 0.181 | 0.073 | 0.626 |
| 500  | 42.96 | 30.93 | 1.17 | 5.01 | 110.65 | 0.361 | 0.361 | 0.187 | 0.085 | 0.730 |
| 1000 | 42.98 | 31.27 | 1.21 | 4.93 | 109.58 | 0.374 | 0.374 | 0.184 | 0.077 | 0.623 |
| 2000 | 42.91 | 31.42 | 1.27 | 5.02 | 111.52 | 0.392 | 0.392 | 0.188 | 0.079 | 0.839 |

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|    |      |       |       |       |      |       |        |       |       |       |       |       |
|----|------|-------|-------|-------|------|-------|--------|-------|-------|-------|-------|-------|
| 71 | 0    | 43.06 | 42.74 | 25.30 | 1.33 | 6.75  | 111.16 | 0.410 | 0.231 | 0.173 | 0.173 | 4.480 |
|    | 250  | 42.02 | 42.45 | 27.05 | 1.30 | 6.46  | 115.20 | 0.426 | 0.242 | 0.170 | 0.146 | 3.510 |
|    | 500  | 42.66 | 42.29 | 26.71 | 1.43 | 6.79  | 119.00 | 0.443 | 0.255 | 0.177 | 0.169 | 5.110 |
|    | 1000 | 42.69 | 42.27 | 26.97 | 1.48 | 6.70  | 118.31 | 0.459 | 0.252 | 0.175 | 0.193 | 4.920 |
|    | 2000 | 42.59 | 42.12 | 26.94 | 1.55 | 6.90  | 120.36 | 0.484 | 0.261 | 0.178 | 0.241 | 6.300 |
| 72 | 0    | 45.09 | 44.73 | 26.37 | 1.30 | 6.78  | 103.73 | 0.406 | 0.241 | 0.157 | 0.066 | 0.121 |
|    | 250  | 44.90 | 44.51 | 28.89 | 1.33 | 6.04  | 106.72 | 0.394 | 0.216 | 0.147 | 0.054 | 0.176 |
|    | 500  | 44.77 | 44.37 | 28.93 | 1.36 | 6.21  | 110.21 | 0.402 | 0.223 | 0.152 | 0.067 | 0.181 |
|    | 1000 | 44.01 | 44.37 | 29.32 | 1.39 | 6.10  | 109.11 | 0.413 | 0.219 | 0.148 | 0.060 | 0.171 |
|    | 2000 | 44.74 | 44.27 | 29.53 | 1.45 | 6.23  | 111.09 | 0.429 | 0.224 | 0.150 | 0.061 | 0.213 |
| 73 | 0    | 41.55 | 41.22 | 20.95 | 1.77 | 10.49 | 141.49 | 0.565 | 0.405 | 0.269 | 0.093 | 0.299 |
|    | 250  | 41.40 | 41.09 | 22.60 | 1.59 | 9.41  | 144.59 | 0.511 | 0.364 | 0.255 | 0.073 | 0.225 |
|    | 500  | 41.32 | 41.00 | 22.46 | 1.63 | 9.68  | 147.75 | 0.522 | 0.376 | 0.262 | 0.078 | 0.236 |
|    | 1000 | 41.34 | 40.93 | 20.31 | 1.93 | 11.82 | 145.61 | 0.619 | 0.460 | 0.285 | 0.073 | 0.190 |
|    | 2000 | 41.31 | 40.88 | 20.36 | 1.98 | 11.98 | 146.63 | 0.635 | 0.466 | 0.287 | 0.064 | 0.261 |
| 74 | 0    | 44.10 | 43.69 | 25.73 | 1.48 | 6.96  | 106.34 | 0.446 | 0.253 | 0.164 | 0.219 | 3.070 |
|    | 250  | 43.09 | 43.46 | 28.05 | 1.43 | 6.33  | 111.63 | 0.434 | 0.232 | 0.150 | 0.182 | 2.290 |
|    | 500  | 43.75 | 43.31 | 27.89 | 1.47 | 6.56  | 114.66 | 0.446 | 0.241 | 0.164 | 0.196 | 2.650 |
|    | 1000 | 43.78 | 43.30 | 28.17 | 1.52 | 6.48  | 113.85 | 0.461 | 0.238 | 0.161 | 0.184 | 2.360 |
|    | 2000 | 43.72 | 43.19 | 28.30 | 1.60 | 6.60  | 115.02 | 0.484 | 0.243 | 0.162 | 0.108 | 2.890 |
| 75 | 0    | 43.74 | 43.40 | 26.60 | 1.33 | 6.24  | 100.53 | 0.402 | 0.229 | 0.150 | 0.110 | 0.694 |
|    | 250  | 43.50 | 43.12 | 28.67 | 1.27 | 5.57  | 100.68 | 0.388 | 0.206 | 0.140 | 0.092 | 0.467 |
|    | 500  | 43.36 | 42.98 | 28.55 | 1.31 | 5.76  | 103.04 | 0.400 | 0.214 | 0.144 | 0.096 | 0.526 |
|    | 1000 | 43.37 | 42.94 | 28.68 | 1.36 | 5.68  | 101.32 | 0.416 | 0.211 | 0.141 | 0.088 | 0.455 |
|    | 2000 | 43.30 | 42.81 | 28.76 | 1.44 | 5.78  | 101.79 | 0.441 | 0.215 | 0.141 | 0.093 | 0.575 |
| 76 | 0    | 42.90 | 42.61 | 27.37 | 1.31 | 5.73  | 99.39  | 0.405 | 0.214 | 0.144 | 0.141 | 1.929 |
|    | 250  | 42.74 | 42.32 | 29.52 | 1.30 | 5.14  | 99.50  | 0.404 | 0.193 | 0.134 | 0.127 | 1.576 |
|    | 500  | 42.60 | 42.17 | 29.42 | 1.33 | 5.31  | 102.05 | 0.414 | 0.200 | 0.138 | 0.131 | 1.905 |
|    | 1000 | 42.62 | 42.15 | 29.71 | 1.38 | 5.25  | 101.36 | 0.431 | 0.198 | 0.136 | 0.134 | 1.858 |
|    | 2000 | 42.55 | 42.03 | 29.81 | 1.46 | 5.34  | 102.05 | 0.455 | 0.202 | 0.136 | 0.170 | 2.650 |
| 77 | 0    | 43.70 | 43.33 | 28.12 | 1.35 | 5.74  | 102.49 | 0.409 | 0.211 | 0.145 | 0.083 | 0.320 |
|    | 250  | 43.49 | 43.13 | 30.74 | 1.20 | 4.95  | 103.39 | 0.365 | 0.183 | 0.134 | 0.086 | 0.337 |
|    | 500  | 43.37 | 43.01 | 30.92 | 1.20 | 5.05  | 107.10 | 0.367 | 0.187 | 0.138 | 0.094 | 0.275 |
|    | 1000 | 43.41 | 43.02 | 31.16 | 1.23 | 4.95  | 105.17 | 0.377 | 0.183 | 0.134 | 0.077 | 0.228 |
|    | 2000 | 43.38 | 42.95 | 31.33 | 1.28 | 4.99  | 105.60 | 0.391 | 0.185 | 0.134 | 0.071 | 0.324 |
| 78 | 0    | 40.99 | 40.61 | 21.75 | 1.60 | 8.24  | 103.68 | 0.517 | 0.323 | 0.190 | 0.149 | 0.194 |
|    | 250  | 40.63 | 40.21 | 23.06 | 1.57 | 7.85  | 109.51 | 0.513 | 0.311 | 0.189 | 0.077 | 0.192 |
|    | 500  | 40.47 | 40.03 | 22.83 | 1.63 | 8.18  | 112.26 | 0.536 | 0.325 | 0.196 | 0.080 | 0.208 |
|    | 1000 | 40.46 | 39.99 | 23.09 | 1.68 | 8.07  | 111.62 | 0.552 | 0.321 | 0.192 | 0.068 | 0.165 |
|    | 2000 | 40.35 | 39.83 | 23.10 | 1.77 | 8.27  | 112.94 | 0.581 | 0.330 | 0.195 | 0.074 | 0.222 |
| 79 | 0    | 43.16 | 42.75 | 26.08 | 1.50 | 6.60  | 107.31 | 0.460 | 0.246 | 0.164 | 0.081 | 0.161 |
|    | 250  | 42.85 | 42.43 | 27.79 | 1.41 | 6.12  | 107.50 | 0.437 | 0.230 | 0.154 | 0.086 | 0.236 |
|    | 500  | 42.71 | 42.27 | 27.69 | 1.45 | 6.34  | 110.80 | 0.450 | 0.239 | 0.159 | 0.089 | 0.266 |
|    | 1000 | 42.73 | 42.25 | 27.80 | 1.50 | 6.25  | 108.71 | 0.466 | 0.236 | 0.156 | 0.078 | 0.226 |
|    | 2000 | 42.66 | 42.13 | 27.94 | 1.57 | 6.37  | 110.16 | 0.489 | 0.241 | 0.157 | 0.087 | 0.328 |

|      |    |       |       |       |      |      |        |       |       |       |       |       |
|------|----|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 00 | 43.79 | 43.49 | 29.94 | 1.22 | 5.81 | 101.83 | 0.359 | 0.214 | 0.148 | 0.079 | 9.147 |
| 250  |    | 43.52 | 43.21 | 29.78 | 1.15 | 5.20 | 106.29 | 0.350 | 0.194 | 0.142 | 0.065 | 0.144 |
| 500  |    | 43.41 | 43.08 | 29.64 | 1.18 | 5.58 | 109.97 | 0.362 | 0.203 | 0.148 | 0.068 | 0.169 |
| 1000 |    | 43.42 | 43.06 | 29.78 | 1.23 | 5.44 | 108.62 | 0.376 | 0.201 | 0.145 | 0.061 | 0.136 |
| 2000 |    | 43.35 | 42.94 | 29.85 | 1.29 | 5.56 | 110.09 | 0.396 | 0.206 | 0.147 | 0.074 | 0.206 |
| 0    | 01 | 43.40 | 43.00 | 24.17 | 1.53 | 7.67 | 108.63 | 0.469 | 0.284 | 0.179 | 0.099 | 0.674 |
| 250  |    | 43.12 | 42.70 | 26.09 | 1.50 | 7.22 | 113.88 | 0.461 | 0.269 | 0.174 | 0.088 | 0.408 |
| 500  |    | 42.98 | 42.53 | 25.99 | 1.55 | 7.53 | 117.75 | 0.479 | 0.282 | 0.180 | 0.092 | 0.538 |
| 1000 |    | 42.99 | 42.51 | 26.19 | 1.60 | 7.43 | 116.63 | 0.493 | 0.278 | 0.177 | 0.085 | 0.460 |
| 2000 |    | 42.90 | 42.37 | 26.29 | 1.67 | 7.58 | 118.11 | 0.517 | 0.285 | 0.179 | 0.090 | 0.571 |
| 0    | 02 | 41.89 | 41.56 | 26.18 | 1.35 | 6.33 | 112.90 | 0.429 | 0.242 | 0.172 | 0.095 | 0.403 |
| 250  |    | 41.67 | 41.35 | 28.91 | 1.23 | 5.52 | 117.01 | 0.391 | 0.212 | 0.161 | 0.082 | 0.295 |
| 500  |    | 41.56 | 41.23 | 28.79 | 1.26 | 5.76 | 122.43 | 0.401 | 0.223 | 0.169 | 0.092 | 0.357 |
| 1000 |    | 41.58 | 41.22 | 28.85 | 1.30 | 5.74 | 121.27 | 0.416 | 0.222 | 0.167 | 0.113 | 0.355 |
| 2000 |    | 41.53 | 41.14 | 28.90 | 1.36 | 5.88 | 123.50 | 0.435 | 0.223 | 0.170 | 0.075 | 0.412 |
| 0    | 03 | 41.49 | 41.17 | 26.11 | 1.32 | 6.19 | 110.04 | 0.423 | 0.239 | 0.168 | 0.107 | 1.224 |
| 250  |    | 41.30 | 40.96 | 28.84 | 1.23 | 5.46 | 114.76 | 0.396 | 0.212 | 0.158 | 0.100 | 0.774 |
| 500  |    | 41.19 | 40.83 | 28.87 | 1.27 | 5.63 | 119.73 | 0.408 | 0.219 | 0.165 | 0.106 | 0.969 |
| 1000 |    | 41.20 | 40.82 | 29.22 | 1.31 | 5.54 | 119.07 | 0.423 | 0.216 | 0.162 | 0.100 | 0.841 |
| 2000 |    | 41.14 | 40.72 | 29.36 | 1.38 | 5.63 | 120.93 | 0.444 | 0.220 | 0.164 | 0.106 | 1.096 |
| 0    | 04 | 43.47 | 43.06 | 25.49 | 1.50 | 6.93 | 106.53 | 0.459 | 0.256 | 0.166 | 0.094 | 0.205 |
| 250  |    | 43.16 | 42.73 | 27.70 | 1.44 | 6.33 | 110.12 | 0.442 | 0.236 | 0.158 | 0.078 | 0.222 |
| 500  |    | 43.02 | 42.58 | 27.52 | 1.48 | 6.59 | 113.51 | 0.455 | 0.246 | 0.164 | 0.079 | 0.248 |
| 1000 |    | 43.05 | 42.57 | 27.69 | 1.52 | 6.51 | 112.18 | 0.469 | 0.243 | 0.161 | 0.071 | 0.215 |
| 2000 |    | 42.98 | 42.46 | 27.82 | 1.59 | 6.66 | 113.92 | 0.491 | 0.250 | 0.163 | 0.067 | 0.300 |
| 0    | 05 | 42.72 | 42.34 | 25.97 | 1.45 | 6.60 | 110.50 | 0.451 | 0.248 | 0.169 | 0.090 | 0.271 |
| 250  |    | 42.46 | 42.05 | 28.14 | 1.38 | 6.06 | 118.56 | 0.432 | 0.229 | 0.168 | 0.080 | 0.260 |
| 500  |    | 42.31 | 41.90 | 28.04 | 1.43 | 6.31 | 124.02 | 0.447 | 0.240 | 0.176 | 0.084 | 0.281 |
| 1000 |    | 42.33 | 41.87 | 28.27 | 1.48 | 6.24 | 123.38 | 0.463 | 0.237 | 0.174 | 0.073 | 0.247 |
| 2000 |    | 42.25 | 41.75 | 28.38 | 1.56 | 6.37 | 125.85 | 0.489 | 0.243 | 0.176 | 0.074 | 0.327 |
| 0    | 06 | 43.12 | 42.78 | 25.77 | 1.41 | 6.98 | 114.43 | 0.434 | 0.260 | 0.177 | 0.093 | 0.975 |
| 250  |    | 43.00 | 42.65 | 27.74 | 1.28 | 6.07 | 110.05 | 0.396 | 0.227 | 0.158 | 0.091 | 0.609 |
| 500  |    | 42.89 | 42.54 | 27.78 | 1.29 | 6.19 | 112.14 | 0.400 | 0.231 | 0.161 | 0.098 | 0.682 |
| 1000 |    | 42.93 | 42.55 | 28.04 | 1.31 | 6.02 | 109.99 | 0.405 | 0.225 | 0.156 | 0.089 | 0.601 |
| 2000 |    | 42.90 | 42.50 | 28.30 | 1.34 | 6.05 | 110.52 | 0.415 | 0.227 | 0.155 | 0.082 | 0.757 |
| 0    | 07 | 43.93 | 43.54 | 26.21 | 1.42 | 6.61 | 105.06 | 0.430 | 0.242 | 0.159 | 0.103 | 1.157 |
| 250  |    | 43.71 | 43.29 | 28.41 | 1.39 | 6.03 | 108.22 | 0.422 | 0.222 | 0.152 | 0.132 | 2.130 |
| 500  |    | 43.57 | 43.14 | 28.29 | 1.43 | 6.26 | 112.01 | 0.434 | 0.231 | 0.158 | 0.151 | 3.090 |
| 1000 |    | 43.60 | 43.13 | 28.47 | 1.47 | 6.19 | 110.74 | 0.448 | 0.229 | 0.155 | 0.165 | 3.110 |
| 2000 |    | 43.55 | 43.03 | 28.61 | 1.53 | 6.32 | 112.37 | 0.466 | 0.234 | 0.156 | 0.203 | 4.220 |
| 0    | 08 | 43.37 | 43.02 | 27.68 | 1.34 | 6.11 | 111.53 | 0.410 | 0.226 | 0.160 | 0.082 | 0.353 |
| 250  |    | 43.14 | 42.79 | 29.66 | 1.26 | 5.63 | 117.61 | 0.388 | 0.210 | 0.158 | 0.076 | 0.269 |
| 500  |    | 43.01 | 42.65 | 29.48 | 1.29 | 5.87 | 122.42 | 0.399 | 0.219 | 0.165 | 0.085 | 0.318 |
| 1000 |    | 43.04 | 42.64 | 29.72 | 1.34 | 5.81 | 121.74 | 0.412 | 0.217 | 0.163 | 0.069 | 0.286 |
| 2000 |    | 42.97 | 42.54 | 29.85 | 1.40 | 5.93 | 124.15 | 0.432 | 0.222 | 0.165 | 0.065 | 0.388 |





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|      |    |       |       |       |      |      |        |       |       |       |       |       |
|------|----|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 89 | 43.27 | 42.89 | 26.54 | 1.39 | 6.10 | 98.19  | 0.420 | 0.226 | 0.147 | 0.086 | 0.260 |
| 250  |    | 43.02 | 42.63 | 26.81 | 1.30 | 5.41 | 98.56  | 0.400 | 0.262 | 0.136 | 0.080 | 0.223 |
| 500  |    | 42.07 | 42.49 | 28.73 | 1.32 | 5.56 | 100.94 | 0.407 | 0.208 | 0.140 | 0.087 | 0.262 |
| 1000 |    | 42.92 | 42.46 | 28.90 | 1.35 | 5.47 | 99.07  | 0.419 | 0.205 | 0.136 | 0.074 | 0.233 |
| 2000 |    | 42.86 | 42.39 | 29.12 | 1.40 | 5.55 | 100.10 | 0.435 | 0.208 | 0.137 | 0.068 | 0.320 |
| 0    | 90 | 43.40 | 43.15 | 26.20 | 1.33 | 6.39 | 101.26 | 0.405 | 0.236 | 0.153 | 0.145 | 1.966 |
| 250  |    | 43.24 | 42.87 | 28.33 | 1.29 | 5.76 | 102.27 | 0.396 | 0.214 | 0.144 | 0.124 | 1.921 |
| 500  |    | 43.10 | 42.71 | 28.17 | 1.33 | 6.00 | 105.36 | 0.409 | 0.223 | 0.149 | 0.135 | 2.600 |
| 1000 |    | 43.11 | 42.69 | 28.26 | 1.33 | 5.93 | 103.78 | 0.424 | 0.221 | 0.146 | 0.150 | 2.660 |
| 2000 |    | 43.03 | 42.56 | 28.06 | 1.47 | 6.20 | 105.13 | 0.454 | 0.232 | 0.149 | 0.191 | 3.870 |
| 0    | 91 | 44.10 | 43.76 | 28.27 | 1.28 | 5.71 | 100.24 | 0.385 | 0.208 | 0.141 | 0.095 | 0.327 |
| 250  |    | 43.91 | 43.57 | 30.89 | 1.14 | 4.93 | 101.16 | 0.345 | 0.180 | 0.130 | 0.076 | 0.271 |
| 500  |    | 43.79 | 43.46 | 30.86 | 1.15 | 5.06 | 104.28 | 0.349 | 0.185 | 0.134 | 0.079 | 0.304 |
| 1000 |    | 43.83 | 43.46 | 31.08 | 1.18 | 4.96 | 102.39 | 0.350 | 0.182 | 0.131 | 0.075 | 0.296 |
| 2000 |    | 43.78 | 43.38 | 31.39 | 1.23 | 5.03 | 103.97 | 0.373 | 0.185 | 0.132 | 0.079 | 0.395 |
| 0    | 92 | 43.12 | 42.77 | 27.35 | 1.31 | 5.87 | 105.49 | 0.404 | 0.218 | 0.153 | 0.072 | 0.166 |
| 250  |    | 42.86 | 42.52 | 30.08 | 1.20 | 5.17 | 110.31 | 0.371 | 0.193 | 0.146 | 0.072 | 0.175 |
| 500  |    | 42.74 | 42.39 | 30.05 | 1.22 | 5.34 | 114.79 | 0.379 | 0.200 | 0.152 | 0.077 | 0.182 |
| 1000 |    | 42.76 | 42.37 | 30.35 | 1.26 | 5.27 | 113.97 | 0.391 | 0.153 | 0.149 | 0.062 | 0.155 |
| 2000 |    | 42.70 | 42.28 | 30.47 | 1.31 | 5.36 | 115.46 | 0.408 | 0.262 | 0.151 | 0.057 | 0.210 |
| 0    | 93 | 44.62 | 44.29 | 29.24 | 1.26 | 5.72 | 107.03 | 0.374 | 0.206 | 0.146 | 0.087 | 0.307 |
| 250  |    | 44.42 | 44.10 | 32.07 | 1.14 | 5.03 | 112.83 | 0.339 | 0.182 | 0.140 | 0.070 | 0.205 |
| 500  |    | 44.31 | 43.99 | 32.18 | 1.15 | 5.22 | 118.99 | 0.344 | 0.189 | 0.147 | 0.071 | 0.221 |
| 1000 |    | 44.34 | 43.99 | 32.23 | 1.18 | 5.14 | 116.87 | 0.353 | 0.186 | 0.144 | 0.063 | 0.190 |
| 2000 |    | 44.30 | 43.92 | 32.52 | 1.23 | 5.23 | 119.35 | 0.367 | 0.189 | 0.146 | 0.059 | 0.249 |
| 0    | 94 | 44.86 | 44.52 | 27.89 | 1.30 | 6.22 | 108.12 | 0.385 | 0.223 | 0.154 | 0.079 | 0.467 |
| 250  |    | 44.67 | 44.34 | 30.30 | 1.21 | 5.65 | 116.55 | 0.360 | 0.203 | 0.153 | 0.074 | 0.357 |
| 500  |    | 44.56 | 44.23 | 30.30 | 1.23 | 5.86 | 122.38 | 0.367 | 0.211 | 0.161 | 0.101 | 0.569 |
| 1000 |    | 44.59 | 44.23 | 30.35 | 1.26 | 5.77 | 120.84 | 0.375 | 0.202 | 0.158 | 0.067 | 0.301 |
| 2000 |    | 44.55 | 44.16 | 30.74 | 1.30 | 5.87 | 124.09 | 0.388 | 0.212 | 0.161 | 0.064 | 0.341 |
| 0    | 95 | 43.77 | 43.43 | 27.22 | 1.29 | 5.90 | 98.31  | 0.390 | 0.216 | 0.144 | 0.081 | 0.423 |
| 250  |    | 43.57 | 43.22 | 29.78 | 1.20 | 5.22 | 101.44 | 0.366 | 0.192 | 0.136 | 0.074 | 0.298 |
| 500  |    | 43.44 | 43.08 | 29.79 | 1.23 | 5.38 | 104.88 | 0.375 | 0.199 | 0.140 | 0.079 | 0.317 |
| 1000 |    | 43.45 | 43.05 | 30.01 | 1.27 | 5.31 | 103.61 | 0.389 | 0.196 | 0.137 | 0.072 | 0.282 |
| 2000 |    | 43.37 | 42.94 | 30.15 | 1.34 | 5.40 | 104.72 | 0.409 | 0.200 | 0.138 | 0.081 | 0.353 |
| 0    | 96 | 43.27 | 42.96 | 25.53 | 1.30 | 6.53 | 100.41 | 0.398 | 0.242 | 0.156 | 0.063 | 0.133 |
| 250  |    | 43.03 | 42.71 | 27.61 | 1.22 | 5.85 | 101.14 | 0.375 | 0.218 | 0.146 | 0.060 | 0.138 |
| 500  |    | 42.91 | 42.57 | 27.45 | 1.25 | 6.08 | 103.51 | 0.387 | 0.227 | 0.150 | 0.065 | 0.161 |
| 1000 |    | 42.94 | 42.57 | 27.56 | 1.28 | 5.97 | 101.61 | 0.395 | 0.223 | 0.147 | 0.058 | 0.137 |
| 2000 |    | 42.89 | 42.50 | 27.78 | 1.32 | 6.06 | 102.62 | 0.408 | 0.227 | 0.147 | 0.058 | 0.187 |

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|      |    |       |       |       |      |      |        |       |       |       |       |       |
|------|----|-------|-------|-------|------|------|--------|-------|-------|-------|-------|-------|
| 0    | 82 | 43.17 | 42.89 | 26.51 | 1.35 | 6.19 | 93.17  | 0.417 | 0.246 | 0.147 | 0.086 | 0.168 |
| 250  |    | 43.02 | 42.43 | 26.81 | 1.30 | 5.41 | 90.55  | 0.400 | 0.202 | 0.136 | 0.086 | 0.223 |
| 500  |    | 42.87 | 42.49 | 28.73 | 1.32 | 5.56 | 100.94 | 0.407 | 0.208 | 0.140 | 0.087 | 0.262 |
| 1000 |    | 42.92 | 42.46 | 28.90 | 1.35 | 5.47 | 99.07  | 0.419 | 0.205 | 0.136 | 0.074 | 0.233 |
| 2000 |    | 42.86 | 42.39 | 29.12 | 1.40 | 5.55 | 100.10 | 0.435 | 0.208 | 0.137 | 0.068 | 0.320 |
| 0    | 90 | 43.48 | 43.15 | 26.28 | 1.33 | 6.37 | 101.26 | 0.405 | 0.236 | 0.153 | 0.145 | 1.966 |
| 250  |    | 43.24 | 42.87 | 28.33 | 1.29 | 5.76 | 102.27 | 0.396 | 0.214 | 0.144 | 0.124 | 1.921 |
| 500  |    | 43.10 | 42.71 | 28.17 | 1.33 | 6.00 | 105.35 | 0.409 | 0.223 | 0.149 | 0.135 | 2.600 |
| 1000 |    | 43.11 | 42.69 | 28.26 | 1.38 | 5.93 | 103.78 | 0.424 | 0.221 | 0.146 | 0.150 | 2.660 |
| 2000 |    | 43.03 | 42.56 | 28.06 | 1.47 | 6.20 | 105.13 | 0.454 | 0.232 | 0.149 | 0.191 | 3.870 |
| 0    | 91 | 44.10 | 43.76 | 28.27 | 1.28 | 5.71 | 100.24 | 0.385 | 0.208 | 0.141 | 0.095 | 0.327 |
| 250  |    | 43.91 | 43.57 | 30.89 | 1.14 | 4.93 | 101.16 | 0.345 | 0.180 | 0.130 | 0.076 | 0.271 |
| 500  |    | 43.79 | 43.46 | 30.86 | 1.15 | 5.06 | 104.28 | 0.349 | 0.185 | 0.134 | 0.079 | 0.304 |
| 1000 |    | 43.83 | 43.46 | 31.00 | 1.10 | 4.96 | 102.39 | 0.350 | 0.182 | 0.131 | 0.075 | 0.296 |
| 2000 |    | 43.73 | 43.38 | 31.39 | 1.23 | 5.03 | 103.97 | 0.373 | 0.185 | 0.132 | 0.079 | 0.395 |
| 0    | 92 | 43.12 | 42.77 | 27.35 | 1.31 | 5.87 | 105.49 | 0.404 | 0.218 | 0.153 | 0.072 | 0.166 |
| 250  |    | 42.86 | 42.52 | 30.08 | 1.20 | 5.17 | 110.31 | 0.371 | 0.193 | 0.146 | 0.072 | 0.175 |
| 500  |    | 42.74 | 42.39 | 30.05 | 1.22 | 5.34 | 114.79 | 0.379 | 0.200 | 0.152 | 0.077 | 0.182 |
| 1000 |    | 42.76 | 42.37 | 30.35 | 1.26 | 5.27 | 113.97 | 0.391 | 0.193 | 0.149 | 0.062 | 0.155 |
| 2000 |    | 42.70 | 42.28 | 30.47 | 1.31 | 5.36 | 115.46 | 0.408 | 0.202 | 0.151 | 0.057 | 0.210 |
| 0    | 93 | 44.62 | 44.29 | 29.24 | 1.26 | 5.72 | 107.03 | 0.374 | 0.206 | 0.146 | 0.087 | 0.367 |
| 250  |    | 44.42 | 44.10 | 32.07 | 1.14 | 5.03 | 112.83 | 0.339 | 0.182 | 0.140 | 0.070 | 0.205 |
| 500  |    | 44.31 | 43.99 | 32.18 | 1.15 | 5.22 | 118.99 | 0.344 | 0.189 | 0.147 | 0.071 | 0.221 |
| 1000 |    | 44.34 | 43.99 | 32.23 | 1.18 | 5.14 | 116.87 | 0.353 | 0.186 | 0.144 | 0.063 | 0.190 |
| 2000 |    | 44.30 | 43.92 | 32.52 | 1.23 | 5.23 | 119.35 | 0.367 | 0.189 | 0.146 | 0.059 | 0.249 |
| 0    | 94 | 44.86 | 44.52 | 27.89 | 1.30 | 6.22 | 108.12 | 0.385 | 0.223 | 0.154 | 0.079 | 0.467 |
| 250  |    | 44.67 | 44.34 | 30.30 | 1.21 | 5.65 | 116.55 | 0.360 | 0.203 | 0.153 | 0.074 | 0.357 |
| 500  |    | 44.56 | 44.23 | 30.30 | 1.23 | 5.86 | 122.38 | 0.367 | 0.211 | 0.161 | 0.101 | 0.569 |
| 1000 |    | 44.59 | 44.23 | 30.35 | 1.26 | 5.77 | 120.84 | 0.375 | 0.202 | 0.158 | 0.067 | 0.301 |
| 2000 |    | 44.55 | 44.16 | 30.74 | 1.30 | 5.87 | 124.09 | 0.388 | 0.212 | 0.161 | 0.064 | 0.341 |
| 0    | 95 | 43.77 | 43.43 | 27.22 | 1.29 | 5.90 | 98.31  | 0.390 | 0.216 | 0.144 | 0.081 | 0.423 |
| 250  |    | 43.57 | 43.22 | 29.78 | 1.20 | 5.22 | 101.44 | 0.366 | 0.192 | 0.136 | 0.074 | 0.298 |
| 500  |    | 43.44 | 43.08 | 29.79 | 1.23 | 5.38 | 104.88 | 0.375 | 0.199 | 0.140 | 0.079 | 0.317 |
| 1000 |    | 43.45 | 43.05 | 30.01 | 1.27 | 5.31 | 103.61 | 0.389 | 0.196 | 0.137 | 0.072 | 0.282 |
| 2000 |    | 43.37 | 42.94 | 30.15 | 1.34 | 5.40 | 104.72 | 0.409 | 0.209 | 0.138 | 0.081 | 0.353 |
| 0    | 96 | 43.27 | 42.96 | 25.53 | 1.30 | 6.53 | 100.41 | 0.398 | 0.242 | 0.156 | 0.063 | 0.133 |
| 250  |    | 43.03 | 42.71 | 27.61 | 1.22 | 5.85 | 101.14 | 0.375 | 0.218 | 0.146 | 0.060 | 0.138 |
| 500  |    | 42.91 | 42.57 | 27.45 | 1.25 | 6.08 | 103.51 | 0.387 | 0.227 | 0.150 | 0.065 | 0.161 |
| 1000 |    | 42.94 | 42.57 | 27.56 | 1.28 | 5.97 | 101.61 | 0.395 | 0.223 | 0.147 | 0.058 | 0.137 |
| 2000 |    | 42.89 | 42.50 | 27.78 | 1.32 | 6.06 | 102.62 | 0.408 | 0.227 | 0.147 | 0.058 | 0.187 |